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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY:

EDITED BY

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

JANUARY, 1846.

Art. I.—*Cases of Fever with remarks.* By J. R. Buck, M.D., Lecturer on the Theory and Practice of Medicine in the Louisville Summer School of Medicine.

D. K., æt. 27 years, very robust, strictly temperate, ship carpenter; health perfect till the fall of 1841, when he first came to Louisville, since which time he has had several attacks of mild intermittent fever. In May, 1844, I attended him several days during a slight attack of bilious fever. In July following I again prescribed for him for chills and fever.

On the 14th of August, 1844, was called to see him; attack commenced two days previous with alternate flashes of heat and chilliness continuing all day. 13th. Had slight but distinct chill, followed by considerable fever. The morning of the 14th I found him with slight fever; dull headache; anorexia; no nausea or vomiting; not the slightest pain or tenderness on pressure over any part of the abdomen; pulse rather frequent, and compressible. Bowels loose from Lee's

pills taken on the 12th. Tongue coated with a dense brownish fur. ℞ Calomel and Dover's powder.

15th.—8 o'clock, A.M. More fever, with much more tenseness and fulness of pulse. Bled to 16 ounces. Calomel and Dover's powder repeated.

16th. No fever; in all respects better; some little tympanitis; bowels still too loose. ℞ Quinine grs. x, opii gr. i, to be taken at one dose; after which was very comfortable until 12 o'clock at night, when fever with delirium came on; frequent copious watery dejections during the night; no tenderness over the abdomen.

17th. Dr. Gross called in consultation. Blisters covering the abdomen; calomel and quinine ãã grs. v ,morphiæ acetat. grs. ii, to be repeated every four hours, until the watery dejections ceased. The only effect of this prescription, which was repeated several times, was to produce free bilious evacuations, still, however, very watery. No sudamina. No petechiæ, or rose colored spots upon any part of the body. No sordes. Tongue became red and clean; sense of hearing impaired.

Died on the 20th; constant noisy delirium for 18 hours previous.

Examination seven hours after death.—Rigidity of limbs; no unnatural appearance of the body. *Brain* not examined. *Chest*, perfectly healthy throughout. *Abdomen*, very slight inflammatory redness in cardiac extremity of stomach; also same in duodenum. *Jejunum* healthy. In lower part of ilium seven patches of Peyer's glands ulcerated, with slight inflammation of the mucous membrane between them. *Cæcum* larger than natural; whole internal lining membrane in a high state of inflammation, with numerous patches of a greenish yellow lymph upon it. *Colon* healthy. *Rectum*, intense inflammation, with some greenish yellow lymph.—*Spleen* two-thirds larger than natural, and much softened. *Liver* and *kidneys* healthy.

Case II.—J. H., æt. 20, ship carpenter, stout, robust, hab-

ts good, generally healthy. In July, 1844, had erysipelas of face and neck, mild, yielding in a few days to laxatives, with argen. nitrat. as an external application.

August 31st, 1844. Called to see him; had been slightly indisposed for two days; some fever; very slight pain in the lower part of the abdomen upon firm pressure; tongue covered with a brownish coat; pulse 88, moderately full; three dejections in 15 hours, thin and light colored; some little nausea, with occasional vomiting. ℞ Leeches to lower part of abdomen; calomel and opium.

September 1st. Pulse more frequent, more volume; pain over the eyes; skin dry and hot; bowels still loose. Bled to 16 ounces. Calomel and opium repeated.

2d. Some better; pulse reduced in force and frequency; skin moist; no pains; discharges from bowels more frequent, but of dark bilious color; no abdominal tenderness. ℞ Blister to lower part of abdomen, calomel and quinine ää grs. x, morph. grs. ii, to be given every three hours. Under this prescription the patient for two days seemed to improve; the discharges from the bowels being less frequent. On the third day the discharges became much more frequent and tinged with blood. The morphia was now increased to four grains every two hours without at all altering the condition of the bowels or procuring a moment's sleep. Mercurial inunction had been rescrted to but without producing any sensible effect. Mustard poultices to the extremities. Carb. ammonia, wine whey, and brandy toddy were all given.

Died on the 8th; intellect clear to the last. No post-mortem examination.

Case III.—J. P., æt. 30, tall, not very muscular, ship carpenter, habits good, lived in same room with case 2d; taken sick at the same time, and with symptoms so analogous, that one prescription answered for both. This almost identity of symptoms, and consequently of treatment continued until the fourth day, when in case 3d a profuse hemorrhage from the bowels (two quarts, according to the nurse's estimate) occur-

red; the patient was much prostrated by this discharge of blood. A little brandy toddy was given occasionally for six or eight hours, when quinine and morphia in very small doses were prescribed, and continued several days. On the eighth day discharged half a pint of blood from the nose. Discontinued attendance on the tenth day; convalescence dating from the first hæmorrhage.

Remarks.—In the three cases here reported we have a type of fever prevailing, more or less in the latter part of every summer and fall, in Louisville and its vicinity. The particular locality in which these cases occurred (near the ship yard) is especially subject to this form of disease. Two causes may be assigned for this,—1st. The situation is low and flat, subject very rarely to overflow, but after every rain remaining very damp, with several large ponds of water upon it for weeks; this low land extends half a mile back of the ship yard to Beargrass creek, which empties into the Ohio river at the city steamboat landing. Unless the season be unusually wet, this creek is little else than a chain of stagnant ponds, into which much filth is thrown from tan-yards and slaughter houses. 2dly. The very great increase in the boat building of this city, and the consequent demand for ship carpenters, attracts every spring a large number of men from the most healthy portions of Ohio, Pennsylvania, New York, &c., and who of course are entirely unused to our climate. Cases 1st and 2d were from Elizabethtown, Pennsylvania; and case 3d from Maine. This disease, however, is by no means confined to this locality; it occurs occasionally in the densely populated part of the city—in Jeffersonville, Indiana, on the opposite bank of the river, and is very common indeed in the surrounding counties.

Does it differ at all from the ordinary autumnal remittent fever, as it has prevailed throughout the West and South for the last few years, or the last half century, at particular seasons? Let the readers of the Western Journal answer.

I have thought that a detailed account of a few cases

might be instructive as throwing some light, not upon the cause of fever perhaps, but upon those structural lesions which are the immediate causes of death, and thereby leading to a more rational and more successful treatment. The most interesting points in their histories, are the entire absence of pain upon pressure over the abdomen in one, and the very slight pain in the other two, notwithstanding the intense and extensive inflammation in the organs of this cavity; and the little influence that opium and its preparations had in controlling the discharges from the bowels. That the same lesions were present in the two last cases, which dissection revealed in the first, there can be no doubt; the close analogy between the symptoms in all these cases, and the identical effects of the same remedies, would alone be sufficient to prove it; but again, in case second there was slight hemorrhage from the bowels, and in case third it was most profuse, prostrating the patient very much, and caused in all probability by the sudden rupture of a blood vessel from ulceration. What practical deductions are to be drawn from these cases? 1st. That absence of pain or tenderness upon pressure over the abdomen, is not inconsistent with the most extensive inflammation and ulceration of the bowels. 2d. That as in case third a decidedly favorable change dated from a very copious hemorrhage, when the pulse did not seem at all to indicate the loss of blood; threfore free depletion, either general or local, would promise benefit in such cases, and the pulse cannot be relied upon as an infallible guide. 3d. That the liver is healthy, secreting bile with its usual energy, and as sensible to the action of its appropriate stimulus, mercury, as in perfect health; that therefore large doses of calomel for the purpose of acting upon this organ are not indicated, and productive of no benefit. 4th. That we cannot hope by the largest doses of opium and its preparations to arrest the discharges from the bowels until by depletion the inflammation is relieved.

Louisville, December, 1845.

Art. II.—*Report of a Case of Narcotism from the Exhibition of Sulphate of Morphia.* By Thomas Carroll, M. D., of Cincinnati, O.

Mr. B., aged 47 years, had been intemperate during 20 years of his life, but had reformed two years before the occurrence about to be related. In July, 1845, he arrived in Cincinnati, and a few days afterwards was taken ill with remittent fever, which, however, was not of a serious character. Dr. H. prescribed for him. The disease had yielded so far that the patient was sitting up, when the Doctor concluded that tonics would be useful, and wrote the following prescription, as he thought:

℞ Sulph. quinine, grs. xxiv.
Hydrargyri sub., grs. xxxvi.
M. Make into xij. powders.

But instead of the sulphate of quinine, he wrote sulphate of morphia. The powders were put up according to the prescription, and one was directed every two hours. The first dose was taken about 9 o'clock, A.M., on the 11th of July. The doctorr saw the patient at 1 P.M., after three doses had been given, he was then sitting up, but quite sleepy. This symptom made the doctor think that congestive fever was occurring, and he ordered, as the best preventive, a continuance of the medicine. The patient was again seen by him at 7 o'clock, P.M., when he was in a comatose state which led the doctor to the conclusion that a bad case of congestive fever had sure enough set in. He directed that the remaining six powders (for the patient had already taken six) should be sent back to the apothecary, and two grains of quinine added to each. This was done, and the medicine was continued, until three doses more were taken. The last dose administered, was got into his mouth by forcing the jaws apart with an instrument; but when the time rolled round for another dose, the masticatory muscles were so tight that the mouth could not be opened even by force. Alarm now seizied on the friends of the patient, and as the Doctor's

health would not allow him to go out in the night, I was called in. When I arrived, I found, by inquiry, that the patient had been bathed in a cold sweat for sometime before the doctor had seen him at 7 o'clock, and that stertorous breathing had existed for hours. I found the extremities completely paralyzed, and bathed with cold perspiration; his breathing was laborious and irregular, sometimes amounting almost to a complete cessation. His masticatory muscles were so firmly fixed that the jaws could not be forced open; and he had not swallowed anything since the exhibition of the last dose of medicine.

I became satisfied that opium had been given in some form or other, and, therefore, went to the apothecary and examined the prescription. No sulphate of quinine was directed in it, but 24 grains of the sulphate of morphia had supplied the place; and it was certain that a mistake had been made in writing the prescription.

Eighteen grains of sulphate of morphia had now been given within 16 hours; and but two hours had elapsed from the exhibition of the last dose, until I saw the patient. I desired consultation, and Dr. Lawson was called in. We determined on the cold douche over the head and body, which we directed to be repeated every half hour; and that at each time the patient should be well dried, and covered until another application should be made. It was also directed that an iced water injection should be given every hour or two; but three, however, were given, all of which were retained many hours, and seemed, at each administration, slightly to benefit his breathing. I continued with the patient for a while, but left him about 4 o'clock, directing that the prescription should be followed punctually, until my return, which I said would be at 7 o'clock. A suspension of the prescription, however, took place for a short time, owing to the idea that the patient must die. I returned at 7 o'clock and found him about as I had left him.

Dr. Lawson again saw him with me, and we still continued the same prescription. A slight convulsive action was ob-

served in the flexor muscles of the left hand, accompanied with laborious breathing. Death seemed to be almost inevitable. At this moment I dashed a large quantity of water over him from a considerable height, which slightly relieved the breathing. He was now denuded of all covering, and laid upon a straw bed; iced water was then dashed on him from head to foot, and continued for some time. He was dried and covered with a blanket for a few minutes, when he was again subjected to the same process; but no good effect, further than a slight relief of the breathing, could be discovered for three hours, when I found that during the time when a full stream of water was falling on him, a general shivering took place, as though he had an ague fit. The moment this chill occurred his breathing became perfectly easy. I now felt certain that he was safe. He was dried well, and placed on a comfortable bed. Ice was still kept to his head (which had been done from the time I first saw him,) and was continued for an hour, before the termination of which time, he spoke. It should be noticed that in using the iced water, the patient was turned over each time of its application, so that it could be dashed on his back. It should also be mentioned that more than half a bushel of ice was used, with a very large amount of water—probably a barrel.

Dr. Woodward saw the patient with us during the afternoon, and agreed with us that no medicine should be given, but a dose of oil for the purpose of carrying off the calomel which had been taken, and the patient took no other medicine. He was well in a few days, and returned to his family.

In reviewing this case it may be said that the recovery was most unexpected, and may, possibly, have been in part owing to the former habits of the individual; yet it seems almost certain, that without the treatment which was adopted the case would have resulted unfavorably. As has been stated, at each application of the cold douche, the breathing was considerably relieved of its stertorous character, at least for a few minutes; though it was long before any other good

effect could be observed. The chill that immediately preceded the establishment of natural breathing, was in all probability the consequence of the almost constant showering. During the three hours immediately preceding this chill, I was with the patient every moment, and used all the iced water I thought was admissible, as consistent with the continuance of life.

One thing seems to me highly probable; that an equivalent amount of opium, would have been certain to have destroyed life by apoplexy. This is one argument, I think, in favor of the use of morphine instead of opium; an argument which others have used before.

Cincinnati, Ohio, November, 1845.

ART. III.—*A Case of Abortion, and Retention of the Placenta.* By A. R. NELSON, M.D., of Rutherford county, Tennessee.

On the night of the 17th July last, I was called to see a negro woman supposed to be in labor. On arriving, I found that the fœtus had already been expelled. From its appearance and size, I supposed it to be from four and a half to five months advanced.

After waiting the ordinary length of time and finding that no efforts were made on the part of the uterus for the expulsion of its contents, the usual measures of an external and tangible character were resorted to, for the accomplishment of this object, but all to no effect.

Seeing the insufficiency of these measures, remedies of an internal character were next administered, and as a matter of course a dose of the secale cornutum was given, but the article produced no effect. On the morning of the 18th a second dose, consisting of half a drachm, was administered, without producing the slightest effect. During the afternoon blood was drawn to the amount of ten or twelve ounces; a

dose of oil was given which operated well. The external organs of generation were very much swollen as was also the abdomen.

She informed me that a day or two previous to her confinement, œdema of the lower extremities had existed. Warm fomentations were applied to the parts, and continued through the day. Her pulse was full and frequent from the commencement, but was reduced by the abstraction of blood.

Friction was applied from the first to the last, but no contraction followed; twenty-four hours after the expulsion of the fœtus, the hook was resorted to, and by means of it a portion of the membranes brought away; during the day the umbilical cord detached itself. At late bed-time ten grains of blue mass, with half a grain of ipecacuanha were administered.

On the morning of the 19th I visited her, and was informed that she had rested pretty well the previous night. Her pulse was rather frequent than otherwise. During the night she felt some sickness at the stomach, which, I suppose, was caused by the medicine given. Between midnight and day she had an alvine evacuation; an hour by sun this was followed by a second, but not understanding that her bowels had been sufficiently moved, a dose of salts was ordered. This produced, however, only two passages. About eleven o'clock in the morning she was reported to have had a chill; after which she became very restless and remained so during the day, complaining of headache which was attended by slight fever.

At night examination per vaginam was made, and the parts were found to be still in a tumid condition. The common hook was again resorted to, and with no little difficulty the placenta, together with the remaining portion of membranes was extracted, in an hour or two afterwards. The patient soon became more quiet, and under the influence of five grains of Dover's powder and ten of blue mass, was left for the night.

On the morning of the 20th I found her comfortable, and learned that she had rested well during the night. Her pulse

was in a better condition, and her situation was in every respect greatly improved.

I will merely add, that this woman was thirty-seven years of age, and that this was her ninth pregnancy, and seventh abortion. Her health appears to be good, except in this respect.

November, 1845.

ART. IV.—*The Case of Dr. Abner Baker, an alleged Monomaniac, who was Executed on the 3rd of October last, for killing his brother-in-law, Daniel Bates.*

We adverted briefly, in a former number, to this case. At that time it was before the Governor with a petition for pardon. The executive clemency was not exercised, and the law was suffered to take its course. The testimony given on the trial is before us, and we propose laying before our readers the material facts of the case, by which they will be enabled to make up an opinion respecting the monomania, which was insisted upon in the defence. Monomania was the only plea set up by the counsel of the prisoner; the killing was unquestionable and undenied. Baker was seen by two witnesses to ride up to the salt works where Bates was engaged, dismount from his horse, advance with a pistol, fire, and then return towards his horse. The ball was received by Bates in the back, and proved mortal in a few hours. Baker went to the house of Hugh L. White, the uncle of his wife, and stated what had occurred, appearing to be highly elated at the deed, and expressing no fears for the result if he could get justice.

The father-in-law of Baker, James White, a witness for the Commonwealth testified, that Baker, becoming jealous, had parted with his daughter three months after their marriage. Baker had charged his wife to the witness with unchastity under circumstances the most incredible; such as

that she had commenced her lewd practices at nine years of age—was seduced at that early period by her teacher, a clergyman of unimpeached moral character—that Bates had come to his bed in the night and communicated with her in his presence, and that she had had criminal intercourse with several of her uncles. The witness further stated, that Baker had exhibited to him a certificate from Mrs. Baker wherein she confessed her guilt in these particulars; and that when he asked her respecting it, she said she was *obliged* to give it. Baker then proposed to witness that if he would furnish him with money he would leave the country with his daughter, go to Missouri, or some new country, and try to live with her. A sum of a thousand dollars was proposed Baker abused Bates to the witness all day; said that he was the "blackest hearted man that ever lived," and repeatedly threatened to kill him. Such language, it was testified, he used in reference to Bates on many occasions; the phrase just quoted recurs in the evidence about a dozen times; but while such was his estimate of Bates, and such his suspicions, it is important to remark that Bates, in his dying declaration, asseverated in the most solemn manner, that he was innocent of all the charges made against him, that he had never injured Dr. Baker, and that his jealousy was unfounded.

Josiah Davis, another witness for the Commonwealth, stated, that Baker, previously to his marriage, had told witness that Bates' negroes were prepared to kill him (Baker); that Bates did not treat his sister, Mrs. Bates, kindly; that he had threatened her life, and, he believed, would have killed her if his heart had not failed him; and that he stayed at Bates' house to protect his sister. Witness testified that the charges were untrue, and that Bates lived happily with his wife.

Several other witnesses on the same part swore that Baker had charged Bates to them with a conspiricy against his life, and that his negroes were bribed to murder him. It was testified that in this state of mind he left Bates' house, leaving his business behind him, as he expressed it, to avoid a difficulty; that he went to Knoxville, and after an absence of a

weeks, during which time he gave strong evidences of insanity, as will presently appear, returned and perpetrated the deed over which his mind had been long brooding.

By various witnesses it was stated that Baker had manifested great apprehensions that Bates was seeking an opportunity to kill him, and had his negroes armed ready to take his life. One negro was sold, and Baker asserted to a witness that Bates disposed of him because he would not promise to engage in the murder. From all the testimony in the case it is plain, that he labored under a perpetual fear of assassination.

It was testified that Baker's eye had a peculiarly wild and fierce expression, which was increased whenever he spoke of Bates or his wife; that he was restless, and behaved in a way to alarm his friends. His step-mother related the circumstances of his behaviour at his father's, when visiting the family the first time after his marriage—his remaining nearly all the time in his room, his indisposition to see company, and his strange conversation, from all of which she came to the conclusion that he was deranged. Other members of the family bore testimony to the same point. His wife was found frequently in tears. He complained to his sisters that persons were admitted to his room at night. He suspected the chastity of his step-mother and sisters, and charged them with keeping a house of ill-fame. One individual in particular was the object of his suspicions; this man came into the room where he was passing the evening with his wife at the house of a friend, when his manner became strange, and his look wild. He paced the floor backwards and forwards, cursed and swore, and wished himself in hell. The lady of the house said to him, that he ought to be ashamed of himself; whereupon he whispered something to his wife, and she was observed to shed tears. The witness who detailed these circumstances is the mother of a deranged son, now confined in a lunatic asylum; her conviction of Dr. Baker's insanity was so clear, that she declared to his sisters and to her fami-

ly that she should feel safer with her son than with Baker. All the female witnesses, as well as every man who bore testimony in the case, united in a favorable report as to the conduct of Mrs. Baker. Not a whisper was uttered against her good name, except by her unfortunate husband whose jealousy, no one doubted, was wholly groundless. From testimony now to be adduced we shall see how wild and extravagant this passion was.

After parting with his wife, and after having made an attempt upon Bates' life in a paroxysm of jealous rage, he went to Knoxville, in Tennessee, where he met two of his brothers, respectable physicians of that neighborhood. To them he related the story of all his imaginary wrongs. He said that Bates had more than once come into his room and cohabited with his wife in his presence. The particulars were minutely given, and among them he stated that Bates made a negro woman stand over him with a bowie knife while the act was in progress. He declared that there had been a plot between his wife and Bates to poison him; that on one occasion, when he sipped a little toddy made for him by his wife, without solicitation, it flew into his head and swelled it up until it felt as large as a bushel; and that if he had drunk as much as usual, "it would have blowed him to hell in five minutes." He assured his brother that his wife was pregnant when he married her, as he ascertained by a manual examination shortly afterwards, and that she miscarried while they were on their visit to his father's—a circumstance rendered utterly incredible by the testimony of all the female witnesses. He also assured him that one of their young sisters had been violated by Bates, and was then in the family way. He recited the proofs he had, that, while his wife was still indisposed from her miscarriage, she had intercourse with a man in Lancaster. To another witness he stated that the clergyman, her teacher, who seduced her, kept up his intercourse with her "until her courses came on" and then desisted—that before her marriage, while suffering from tooth ache, a man went into a room where she was lying on a bed, and cohab-

ited with her—that a negro man, after their marriage, had crawled up to the window, got into her room, and had intercourse with her; the proof of which was, that when he slept with her "*she filled him full of seed ticks*," which had come from the negro, some of which he held out his hand to exhibit to a witness. He told the same witness that his mother had opened the door to admit a man to his bed while he was on the visit to his father's. He declared to another witness that "his wife was the smartest woman that ever lived; that she would lay her ear on his breast and ascertain when he was asleep"—and that he "wrung himself around her," and so managed to get her to give the certificates. His horse falling lame while he was at his father's, he charged a negro with having injured him for the purpose of detaining Mrs. Baker in order that he might continue to have criminal intercourse with her. After he had committed the fatal deed and was in the custody of a magistrate, he related to persons present all these transactions, and as one of them testified "told him over and over the same things with great minuteness." And when he was brought to trial before the magistrates, and the plea of insanity was set up in his defence, he declared that he "would rather be hung than that such a plea should be relied upon." He would plead justification; that he was justifiable; that Bates was at the head of a combination to take his life, and that he could prove it by Mrs. Bates.

It was made clear by all the evidence that Dr. Baker was of a remarkably suspicious disposition, and that his intimate friends had often been alarmed by evidences of insanity; still it does not appear that any of the witnesses were led to suspect the soundness of his mind by the many strange and incredible stories he told of his wife. On the contrary, being a physician in good practice, esteemed a man of strong sense, and on nearly every subject exhibiting a lucid judgment, they pretty uniformly testified their conviction that he was in his right mind. Most of them had never heard of monomania, and they had not supposed that a man might be insane on

one subject while on others he evinced a sound understanding. The presiding judge, it would seem, did not admit of this distinction; for we are informed that he asked a medical witness "whether such a disease as *monomania* was known and recognized in medical authority;" and on being answered that it was both in law and medicine, he is reported to have "rejoined, in the hearing of the jury, that he had only made the inquiry as to medicine—he claimed to know something of the law himself."

Among the witnesses in this case were three physicians—Dr. H. Baker, to whose testimony we have already referred in part, Dr. Reid, and the late Professor Richardson. Concerning the state of his brother's physical system Dr. Baker stated, that "his hands were icy cold, his bowels costive, stomach irritable; that he appeared greatly distressed, watchful, and restless." But all this, and a letter received from his father intimating a fear that his son, Abner, was deranged, did not raise in his mind a suspicion that he was the subject of monomania. He showed the letter to his brother who evinced great indignation at the charge, which, we have seen, he continued to repel. He was exceedingly offended at his counsel because they persisted in relying upon it, and never forgave his father for expressing an apprehension that he was insane. It is most worthy of remark, that, in the end, he came to regard his father and brothers as his worst enemies.

Dr. Reid testified that, in his opinion, Dr. Baker was laboring under illusions of mind in regard to his wife, and so far was deranged; that he had known B. for years, and that he was in the habit of talking wildly on some subjects; that in view of the monstrous charges he had made against his wife and others, he should certainly pronounce him deranged on that subject.

The testimony of Dr. Richardson was ample and decided. He attended the trial, by request of the friends of the accused, for the purpose of giving an opinion on the case—that opinion was, that, in all his practice for thirty years, "he had not seen a better and more interestingly developed case of

monomania." So indicative was Baker's appearance of a mind diseased, that he believed he "could have picked him out of the crowd in the court house as a monomaniac." He visited the prisoner repeatedly in his jail, and found his physical condition and appearance evidently those of a deranged man; his pulse, temperature, expression of eye, hang of the muscles of his face, tongue, and whole aspect afforded to his mind infallible proofs of it. In his conversation, especially when it turned upon Bates or his wife, he was wild, incoherent, and erratic; "he seemed to believe, and asserted with a conviction apparently intuitive, things that seemed to the witness not only very incredible but impossible." When on these subjects "his eyes became singularly red, excited, and obviously maniacal."

Let us recapitulate: Dr. Baker, then, fully believed in the truth of all the charges he made, as is evident from the manner in which, time and again, and to a multitude of persons, he reiterated them. He believed that his wife was violated by a clergyman, of spotless reputation, when she was but nine years of age, that she cohabited with him until puberty, and that this clergyman made a *harem* of his school. He believed that his wife brought on abortion, a month after their marriage, by pressing on her abdomen, and that she gave birth to the child in the privy, and was able, not only to be about afterwards, but to go into company, and escape all suspicion of the females around her that she had miscarried. He believed that his mother and sisters kept a house of prostitution—that they introduced lewd men into his room at night, that, in his presence, they might violate his bed, while his wife bore the signs of her miscarriage still upon her. He believed that this wife, while yet a bride, was ready to yield, night after night, to the embraces of an aged brother-in-law, her uncles, a negro, and her own father! He not only believed that his wife was thus ready to prostitute herself to every man, of whatever color, or of whatever affinity to her, but that the intercourse took place on his own bed, and before his own eyes.

Medical men, everywhere, considering this testimony came to the conclusion expressed by Prof. Richardson, that Dr. Baker was deranged in respect to his wife, and that in a fit of insane jealousy he had taken the life of his brother-in-law. So viewing it, the physicians of Lexington, of Frankfort, of Danville, of Lancaster, and of Louisville communicated to the Governor their solemn conviction of his insanity. These expressions of professional conviction were unavailing, and the unfortunate man was executed. Under the gallows his manner was as it had been, and his vehement asseverations to the last were of his wife's infamy, and of his own justification. In other words; he died like an insane man. No relentings, no looking forward to the rewards of a hereafter, no tenderness towards the friends around him, or for his absent father and sisters, evinced the pious education he had received, or any lingerings of humanity within him.

If he had been affecting insanity up to this time, is it reasonable to believe that he would have maintained the character to the last? If not a maniac why continue to rave like one when there was no longer any hope of pardon, and while the executioner was adjusting the fatal cord about his neck? No one can doubt that the belief of his wife's baseness was rooted in his mind, and that he felt himself fully justified in taking the life of the man who had first violated his bed, and then conspired against his life. Except upon this principle, his conduct was inexplicable throughout. He had nothing to promise himself from all his cruel treatment towards his wife, and his violence towards Bates. She was the wife of his choice, and, at times, he displayed the most violent affection for her. Bates was his friend, as well as his kinsman. In his profession his prospects were fair. His father-in-law had wealth, of which, in due time, he had the prospect of becoming one of the inheritors. By kindness to his wife, and by preserving friendly relations with his wealthy and influential brother-in-law, he stood every chance to rise in his profession and do well. By taking the fatal step which he did, he brought upon himself certain ruin. It was tes-

tified by one witness, that Bates said that the doctor had quarreled with him because he did not receive money from him fast enough; but it was clear that the taking of his life would not cause it to flow faster, but, on the contrary, cut off his supply from that source altogether. The father-in-law related that Baker spoke to him of money; but it was under circumstances, and connected with accusations against a daughter of so monstrous and incredible a character, that it is impossible to read them without a feeling, that the man who would go to a father with such a story, and such a proposition must be insane. And in this light it appeared to the father, for he testified that he said to Dr. Baker, on the occasion referred to, that "he was either deranged, or one of the greatest scoundrels in the world." Up to this time Baker had stood well among men; we have no proof that he was wanting in principle, but much proof that he had been a dutiful son, and a respectable student and practitioner of medicine. By departing from a life of honor he had nothing to gain, and everything to lose. Not a shadow of evidence was adduced, that his wife was guilty of any one of his charges, and we are left to infer that the crimes imputed to her were either the hallucinations of a disordered brain, or else the fabrications of a man so base, that he was willing to render his wife infamous in the eyes of her father, and still live with her; and all this for a thousand dollars. His whole previous life is inconsistent with the latter supposition, while all that was related on the trial of his deportment after his marriage supports the idea that he was jealous even to madness. No man, not insane or utterly infamous, would have used such language concerning a wife as it is proved that this unfortunate man continued to do up to the very moment of his execution. He was not infamous; and our conclusion, therefore, is, as expressed by a multitude of medical witnesses, that he was a fit subject for a madhouse, and not the gallows.

Y.

REVIEWS.

ART. V.—*Urinary Deposits, their Diagnosis, Pathology, and Therapeutical Indications.* [By *Golding Bird, A.M., M.D.*, Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital; Licentiate of the Royal College of Physicians; late President of the Westminster Medical Society; Fellow of the Linnean Society of London; Corresponding member of the Philosophical Institute of Basle, of the Philosophical Society of St. Andrews, of the Medical Society of Hamburgh, &c., &c., &c. Philadelphia: Lea & Blanchard. 1845. 8vo. pp. 227.

The author of this volume is at once a chemist skilled in analysis, and a practitioner who has for years carefully noted diseases at the bedside. It is therefore manifest, that he is qualified in an uncommon degree to discuss the subject of urinary deposits, in which the phenomena belong as much to chemistry as to pathology. Such are the laborers from whom science is likely to derive the most valuable results, as to all the pathological conditions which involve chemical reactions. The mere chemist is not competent to the task of unfolding them; and the pathologist without the tests and reagents of the laboratory is unable to account for the series of changes. The union of the two, as it is found in Dr. Bird, is indispensable to a successful prosecution of such researches. Chemistry places in his hands instruments for detecting morbid products, and for estimating the departure of the various fluids of the body from a state of health, and clinical observation answers as a check upon the speculations of the laboratory. But to the work before us, of which it is our pur-

pose to attempt an abstract in this and a succeeding number of our Journal.

The author observes, in his preface: "In coming in contact with pupils in the course of my duties as a teacher of my profession, and in mixing with medical men, in practice, I have often found them in want of some work which would enable them readily to discover the nature of a deposit in the urine, and succinctly point out its pathological and therapeucal indications." It is as a manual for the practitioner in urinary affections that he presents his work to the profession, and in that character it has the highest claims to our attention. Its matter is condensed, and so arranged that ready reference may be made to any topic.

The following observations relative to the superficial examination of the urine in the sick room will be found of great value by the practitioner:

"A piece of litmus paper should be immersed in the urine, which, if acid, will change the blue color of the paper to red. Should no change occur, a piece of reddened litmus paper must be dipped in, and if the secretion be alcaline, its blue color will be restored; but if no change occur, the urine is neutral.

"Some of the urine should then be gently heated in a polished metallic spoon over a candle, or what is preferable, in a test-tube over a spirit-lamp, and if a white deposit occurs, albumen or earthy phosphates are present; the former, if a drop of nitric acid does not redissolve the deposit, the latter if it does.

"If the urine be very highly colored, and undergoes no change by boiling, the coloring matters of bile, blood, or purpurine are present. To determine which, pour a thin layer of urine on the back of a white plate, and allow a few drops of nitric acid to fall in the centre; an immediate and rapidly ending play of colors, from green to red, will occur if bile, but no such change if purpurine alone exists. Should the highly colored urine alter in color or transparency by heat, the presence of blood must be suspected.

"If the addition of nitric acid to deep red urine, unaffected by heat, produces a brown deposit, an excess of uric acid exists. If the urine be pale, immerse the gravimeter, and if

the specific gravity be below 1·012, an excess of water exists in the urine, but if above 1.025, the presence of sugar, or excess of urea is indicated. To determine which, place a few drops in a watch-glass, add an equal quantity of nitric acid, and allow the glass to float on some cold water; crystalization of nitrate of urea will occur in two or three minutes, if the latter exists in excess. Should this change not occur, the urine must be examined specially for sugar, which, it must be remembered, may exist in small quantities, without raising the specific gravity of the fluid.

"Should the urine be alcaline, add a drop of nitric acid; if a white deposit occurs, albumen is present; if brisk effervescence follows the addition of the acid, the urea has been converted into carbonate of ammonia.

"*Urine depositing a visible sediment.*

"If the deposit is flocculent, easily diffused on agitation, and scanty, not disappearing on the addition of nitric acid, it is chiefly made up of healthy mucus, epithelium, or in women, an admixture of leucorrhœal discharge.

"If the deposit is ropy and apparently viscid, add a drop of nitric acid; if it wholly or partially dissolves, it is composed of phosphates, if but slightly affected, of mucus. If the deposit falls like a creamy layer to the bottom of the vessel, the supernatent urine being coagulable by heat, it consists of pus.

"If the deposit is white, it consists of urate of ammonia, phosphates, or cystine; the first disappears on heating the urine, the second on the addition of a drop of diluted nitric acid, whilst the third dissolves in ammonia, and the urine generally evolves an odor of sweet-briar.

"If the deposit be colored, it consists of red particles of blood, uric acid, or urate of ammonia, stained with purpurine. If the first, the urine becomes opake by heat; if the second the deposit is in visible crystals; if the third, the deposit is amorphous, and dissolves on heating the fluid.

"Oxalate of lime is often present diffused through urine, without forming a visible deposit; if this be suspected, a drop of the urine examined microscopically will detect the characteristic crystals.

"Much of the little time required for the investigation thus sketched out, may be saved by remembering the following facts:

"If the deposit be white, and the urine acid, it in the great majority of cases consists of urate of ammonia; but should it not disappear by heat, it is phosphatic.

"If a deposit be of any color inclining to yellow, drab, pink, or red, it is almost sure to be urate of ammonia, unless visibly crystalline, in which case it consists of uric acid.

"The only apparatus and re-agents required for these investigations at the bedside are—

"A gravimeter, made small enough to float in an ounce of fluid.

"Red and blue litmus paper.

"A test-tube and watch-glass.

"Nitric acid."

The urine is affected by a variety of circumstances, and varies with the food and drink, and with the condition of the body. Dr. Bird recognizes three varieties of this secretion.

"Firstly, that passed some little time after drinking freely of fluids, generally pale, and of low specific gravity, (1.003—1.009) *urina potus.* Secondly, that secreted after the digestion of a full meal, varying much in physical characters and of considerable destiny: (1.020—1.028 or even 1.030,) *urina chyli vel cibi.* Thirdly, that secreted from the blood independently of the immediate stimulus of food and drink, as that passed after a night's rest, *urina sanguinis;* this is usually of average density, (1.015—1.025,) and presents in perfection the essential characters of urine."

To ascertain the specific gravity of the urine—

"If a gravimeter be not at hand, any small stoppered phial may be substituted. For this purpose, counterpoise the empty bottle and stopper in a tolerably good balance, with shot or sand. Then fill it with distilled water, insert the stopper, and carefully ascertain the weight of the water it contains. Empty the bottle, fill it with urine, and again weigh it; the specific gravity of the fluid will be readily found by merely dividing the weight of the urine by that of the water."

The chemical composition of the urine in health is as follows:

I. ORGANIC PRODUCTS.

1st. Ingredients characteristic of the secretion, produced by the destructive assimilation of tissues, and separated from the blood by the kidneys.	Urea, uric acid, coloring and odorous principles.
2d. Ingredients developed principally from the food during the process of assimilation.	Hippuric acid, lactic acid? accidental constituents.

II. SALINE PRODUCTS.

3d. Saline combinations separated from the blood, and chiefly derived from the food.	Phosphates, Chloride, of sodium.
4th. Saline combinations chiefly generated during the process of destructive assimilation.	Sulphates.

III. INGREDIENTS DERIVED FROM THE URINARY PASSAGE.

5th. Mucus of the bladder.
6th. Debris of epithelium.

"Of these, the first class of ingredients can alone be considered as really essential to the urine, and characteristic of it as a secretion, the kidneys being the only organs which normally secrete these elements from the blood. The saline ingredients of the second class are met with in most secretions of the body, with the exception of the sulphates, which are rarely found except in the urine. The third class of elements is met with in all fluids passing over mucous surfaces."

The urea, which is the characteristic ingredient of urine, bears a striking proportion to the quantity of azote taken in the food, as appears from the following table, copied by our author from Dr. Lehmann, of Leipsic:

Diet.	Animal.	Vegetable.	Mixed.	Non-nitrogenised.
Urea in the urine, of 24 hours.	819.2	346.5	500.6	237.1

Among the other constituents of urine is sulphuric acid, which Dr. Bird maintains is found in too large a quantity to

be explained by its presence in the food, and which, therefore, he refers to the oxydation of sulphur, one of the elements of the protein compounds.

The urine, which in health, and while its constituents maintain their proper relation to each other, is clear and of a pale amber color, becomes turbid when any of its ingredients exist in a comparative or real excess. All the deposits found in it may be divided according to our author into the four following classes:

"*Class* 1.—Deposits composed essentially of ingredients formed directly or indirectly from the metamorphosis of tissues, or from the organic elements of food.

Uric acid and urates.
Uric oxide.
Oxalate of lime.
Cystine.

"*Class* 2.—Deposits composed of ingredients of inorganic origin; including—

Phosphate of lime.
Ammonio-phosphate of magnesia.
Carbonate of lime.
Silicic Acid.

"*Class* 3.—Highly colored deposits (black or blue) of doubtful origin,

Cyanourine.
Melanourine.
Indigo.
Prussian blue.

"*Class* 4.—Deposits consisting of non-crystalline organic products; including—

A. *Organized.*
Blood.
Pus.
Mucus.
Organic globules.
Epithelium.

B. *Non-organized.*
Milk.
Fatty matter.

c. *Possessing independent vitality.*
Spermatozoa.
Torulæ.
Vibriones."

The first deposit described is the *uric acid*, the diagnosis of which is thus given:

"When heated in the urine, the uric acid deposit does not dissolve; the crystals merely become opaque. It generally becomes more distinct from the solution of urate of ammonia, which is frequently mixed with it, and sometimes completely conceals it from view. Hence the best mode of discovering this deposit, is to warm urine, turbid from excess of urate of ammonia, in a watch-glass; the acid becomes visible in the centre of the glass, as soon as the urate dissolves. Heated with liquor potassæ, the uric acid deposit dissolves, from the formation of an urate of potass of sparing solubility. Hydrochloric and acetic acids are without any action, but the nitric readily dissolves it, and by careful evaporation a residue of a beautiful pink color becoming of a rich purple, on being laid over the vapor of ammonia, is left. This colored residue is the murexid of Liebig, the purpurate of ammonia of Dr. Prout. Exposed to heat in a platinum spoon, the uric acid deposits burn, evolving an odor of bitter almonds; and finally leave a small quantity of a white ash, which generally contains phosphate of soda or lime.

"*Characters of urine depositing uric acid.*—When urine contains an excess of this acid, it generally lets fall crystals on cooling, uric acid being very seldom deposited before emission. It usually possesses a deeper amber tint than natural, sometimes being of a reddish brown color. Very high colored urine, however, seldom deposits uric acid until after the addition of a stronger acid. Urine never lets fall spontaneously all its uric acid as a deposit, for after being filtered from a sediment of this substance, the addition of a drop of nitric acid generally causes the deposition of an abundance of crystals of uric acid in a few hours.

"Urine depositing uric acid always reddens litmus paper, and often contains an excess of urea, so as to crystalize slowly when mixed with nitric acid in a watch-glass. Its specific gravity is generally rather above 1.020. An exception to the above character is presented by the pale urine of infants at the breast, among whom deposits of uric acid are

common. These often appear as a yellow crystalline sand, whilst the supernatant urine is frequently of low specific gravity, often 1.006, as pale as water, and nearly destitute of urea."

Urate of ammonia, another of the urinary deposits, is recognized by the following characters:

"These deposits vary in color from absolute whiteness to a pale fawn color, which is the most frequent tint, brick-red, pink, or purple. All these various colored deposits present certain characters in common; they never appear in the urine until after it has cooled, and disappear with the greatest readiness on the application of heat. The purple deposits require rather a higher temperature for solution than the other. The addition of liquor ammoniæ, or liquor potassæ, immediately dissolves deposits of urate of ammonia. Their chemical constitution is shown in a very interesting manner by examining a drop of the turbid urine with the microscope between two plates of glass; an amorphous powder will be alone visible, unless uric acid be present; then add a drop of hydrochloric acid, the turbidity will disappear, and in a short time crystals of uric acid will be seen growing in the fluid, the ammonia having deserted this substance to unite with the acid which had been added.

"*Characters of urine depositing urate of ammonia.*—The following modifications are most important.

"1st. A pale urine of low specific gravity (1.012), becoming opaque on cooling from the deposition of nearly white urate of ammonia, which, instead of readily falling, forms rope-like masses in the fluid, and presents on a superficial view so much the appearance of muco-pus, as to be mistaken for it. Its disappearance on the application of heat at once will discover the error.

"2d. A pale amber colored urine of moderate density (1.018), which on cooling lets fall a copious fawn colored deposit, resembling bath-brick grated into the urine, disappearing with the utmost readiness on applying a gentle heat. This deposit is of frequent occurrence, is often very transient, and is so constantly an attendant on the slightest interference with the cutaneous transpiration, that a 'cold' is popularly diagnosticated whenever this state of things exists.

"3d. Whenever febrile excitement prevails, the urine becomes concentrated, rises in density (1.025,) and deposits on

cooling a reddish brown sediment, constituting the well-known lateritious, or brick dust sediment. This variety of urine generally becomes turbid on the addition of a drop of nitric acid, not from the coagulation of albumen, as has been frequently erroneously supposed, but from the precipitation of uric acid. This is always in minute microscopic crystals, notwithstanding the amorphous appearance it presents to the naked eye.

"4th. In well-marked affections of the portal circulation, especially when connected with organic disease of the liver or spleen, or when suppuration, particularly of a strumous character, is going on in the body, the urine is generally found to possess in many instances a deep purple or copper color, often verging on crimson, so as to have led to the idea of blood being present. These deep tints appear to me to depend upon the presence of an excess of purpurine.—Whenever a deposit of urate of ammonia occurs in such urine, either spontaneously or by immersing it in a freezing mixture, it combines with the pink pigment forming a kind of lake, and which is often so abundant as not to entirely disappear by heat, until the urine is diluted by the addition of water. These deposits do not exhibit their delicate tints until after being collected in a filter; they readily give up their coloring matter to alcohol, which leaves their urate of ammonia nearly unchanged."

[TO BE CONTINUED.]

ART. V.—*Elements of Pathological Anatomy;* Illustrated by colored engravings and Two Hundred and Fifty Woodcuts. By SAMUEL D. GROSS, M.D., Professor of Surgery in the Medical Institute of Louisville; Late Professor of Pathological Anatomy in the Medical Department of the Cincinnati College; Surgeon to the Louisville Marine Hospital, etc., etc. *Second Edition, thoroughly Revised and greatly Enlarged.* Philadelphia: Ed. Barrington & Geo. D. Haswell. Louisville: James Maxwell, jr. 1845. Super-royal 8vo. pp. 822.

The words, "thoroughly revised, and greatly enlarged," however loosely applied in other instances, mean something on the present occasion. On comparing the former edition of this work with the present, it will be found not only that

a large amount of matter, equal we are told to 300 pages, has been added, but that there is scarcely a page, or even a paragraph, which has escaped the "forked pursuit" of the author's pen, which has not been retouched, changed, condensed—in short, to revert again to the language of the title-page, *revised.* Indeed the labor expended on this revision, and in the collocation and arrangement of new facts, must have been little short of what would be required to write for the first time an entire volume. Evidently, though, it has been a labor of love, on the part of the author, rather than a task; and he was fortunate in securing publishers who seem to have entered into his own spirit. The mechanical execution of the work is deserving of the highest praise. The typography is beautiful. The illustrations, whether lithographs or xylographs, are, with very few exceptions, of the first order of merit, and many of them are really superb; the colored lithographs, especially, are superior to any we have ever seen from the press of this country. In short, as to all the externals, it is a volume of rare beauty and excellence, and one of which the publishers may well feel proud.

As in the first edition, Prof. Gross divides his treatise into—1. *General Pathological Anatomy*, wherein is discussed all that the lesions of the different organs and textures of the body have in common with each other; and 2. *Special Pathological Anatomy*, which presents us with the morbid anatomy of each particular organ and texture. The first part was noticed at some length in the second volume of this Journal (first series, 1840), and we should pass it over on the present occasion but for the fact that the author has added several new chapters which call for some notice, and that the doctrines which it contains not only lie at the very foundation of his system, but pervade every part and portion of it. In thus doing justice, however, to the author, we run the risk of doing injustice to the reader. We shall necessarily travel over ground familiar to the latter, point out to him that which was pointed out before, repeat to a greater or less extent that which has already been brought under his notice.

But we beg him to remember, that a really good story is never the worse for a second telling, nor a good book for a second reading—above all, that it is the repetition of error which becomes dangerous, not the repetition of truth.

As might be expected from the title, Prof. Gross deals very sparingly in speculation. He is disposed to stop where a good eye and a steady hand will no longer avail. He does not detain us by flickering and fanciful inquiries into the essence of disease. The solids and fluids of the body, he reminds us, are intimately blended and associated, have a mutual dependence, a reciprocal influence, and health seems to consist in a certain concert or harmony between the two. When this harmony is destroyed, when the fluid and solids are, as it were, arrayed against each other, when the latent sympathies which bind organ to organ, and texture to texture, are aroused and brought into play, we have *disease.* Disease, now, in the common acceptation, is either functional or organic. As used by most pathologists the word *organic* refers to *permanent* changes in the condition of an organ. But Prof. Gross means by it not only the permanent, but also every *temporary* alteration which the tissues or organs experience in a state of disease. As meaning the same thing, he employs occasionally the word structural. Used in this sense, it is exceedingly questionable if a functional disease exists, "a mere aberration of the physiological state of a part, without any change in its anatomical elements."

We come now to the two fundamental propositions of the author:

"Bearing in mind the above definition, it may be assumed, as a general proposition, liable to few exceptions, that all organic diseases, whatever be their seat or extent, are the result of inflammatory action, either of an acute or a chronic kind. To many, this proposition may be startling; nevertheless, if it be carefully examined, it will be found, I doubt not, to be grounded on fact. The truth of this remark will appear more evident as we proceed.

"The second proposition that may be stated is, that every inflammation, irritation, or morbid action, is originally of a

local nature; that is to say, it always makes its impression in the first instance upon some particular part, texture, or organ. After this inflammation has continued for a longer or shorter period, it often happens that it extends to and implicates other structures. If, for instance, the mucous membrane of the stomach be fretted, the morbid action accruing from this cause will be confined at first to that lining; or, in more comprehensive terms, the disease will be strictly local in its character: by degrees, however, as the disorder progresses, the adjacent parts, such as the submucous cellular tissue, become affected; and, spreading still further, it next invades the muscular fibres of the organ, and, finally, the peritoneal covering. It is in this manner that most affections, which are originally local, extend their sphere of action so as to become general, whether they be considered simply in reference to one organ, to several, or to a great number of them."

Inflammation is greatly modified, as to intensity, progress, and mode of termination, by temperament, age, sex, habit, climate, season, the nature of the exciting cause, and the character of the tissue affected. The *period* of life most obnoxious to it is from the first to the tenth year. The skin, the mucous membranes, the lymphatic system, and the arachnoid membrane, are particularly liable to suffer in children; the lung and its coverings, the brain, liver, heart, the veins and arteries, in adults. The genital organs rarely suffer before puberty; but towards the decline of life, affections of the uterus, ovaries, breasts, and testicles, are frequent. Inflammation of the brain, spleen, heart, and arteries, is most common in *men;* that of the peritoneum, veins, and lymphatics in *women.* The *seasons* most favorable to it are winter and spring; it is more common in moist situations than dry, in cold and hot climates than in temperate. Inflammation varies in rapidity and intensity, and to express these differences our author retains the old terms *acute* and *chronic.* He objects to the word *sub-acute*, and employs instead the terms mild, slight, or moderate. Its progress, whether to reparation or the contrary, is much the most rapid in highly vascular and nervous organs. The affection may be *latent*, as in certain forms of

pneumonia, arachnitis, and in typhoid fever. It may also be *intermittent*, as in some neuralgias, in chilblains, &c.

"The disease before us does not occur with equal frequency in all the organs and tissues of the body. There are some parts, in fact, in which it has been doubted, though, as I think, without any foundation in truth, whether this affection ever takes place. Such are the nails, the epidermis, and the hairs. These structures are supposed, by general anatomists, to be destitute of vessels, and, therefore, incapable of performing any vital action. This, however, is merely a conjecture; the fact remains to be proved, and, for my own part, I feel as certain that these textures are susceptible of inflammation, as that the liver is, the stomach, or any other organ.

"The cellular, mucous, serous, and dermoid textures are particularly prone to inflammation. In children, this is different. In them, the cutaneous and mucous textures are infinitely more liable to inflammation than the cellular tissue and serous membranes—the frequency of their attack being, as nearly as can be, in the order here stated. It is here that the disease can be studied with the greatest advantage, both as it respects its phenomena and modes of termination, inasmuch as it is usually well marked, intense in degree, and rapid in its progress. The synovial membranes, the fibrous envelopes, the bones, ligaments, and cartilages, with the muscles and their tendons, inflame with difficulty; but when the disease has once fastened itself upon them, they readily yield to its influence, the sufferings are often excessively severe, and the consequences very serious. The bloodvessels, nerves, and absorbents, are all more or less liable to phlegmasia. The conservative powers of these structures, especially of the former, is remarkable, and is strikingly evinced in cases of gangrene, where, as will be hereafter shown, they frequently retain their vitality amidst the half putrefied mass.

"Of the organs, some are more ready to take on inflammation than others. Those which are most frequently affected, at least in this country, are the lungs, spleen, liver, uterus, and brain. The heart, ovaries, thyroid body, pancreas, prostate gland, testicles, and kidneys, are comparatively rarely the seat of this disease.

"Respecting *specific* inflammation, some parts, again, are more prone to this disease than others. Thus, erysipelas commonly attacks the skin; anthrax, the subcutaneous cellu-

lar tissue; rheumatism, the fibrous envelopes of the extremities; tubercle, the lungs; scirrhus, the glandular organs. In the skin, numerous varieties of inflammation, both of an acute and chronic kind, are observed, that never occur in any other of the elementary textures and systems of the body. To this category specially belong the different species of eruptive and scaly diseases, which have their seat, for the most part, in the superficial portion of the dermis, the net-work of Malpighi, and the cuticle.

"Although we have employed here the term 'specific,' yet it must be confessed that it is one of very equivocal signification; and, in order to remove all ambiguity respecting it, it will be necessary to determine, if possible, the sense in which it is understood by professional men. Almost all surgical authors agree in stating that there are two descriptions of specific inflammation; one of which is produced, it is alleged, by a peculiar condition of the constitution, and the other by the action of a special virus. Under the influence of the first are developed what are denominated the heterologous formations, such as tubercle and scirrhus, together with gout, rheumatism, and erysipelas; under that of the latter a disease which manifests a particular train of phenomena, which exerts its effects only upon a particular set of structures, and which can only be excited by particular causes. To such a classification, surgically considered, there is no special objection; but, viewed philosophically, or in reference to the laws of healthy and abnormal action, there is no ground whatever for such a distinction. All morbid action, indeed, whether acute or chronic, is, properly speaking, specific, or, what is the same thing, exerts a particular influence in relation to the particular structure which it implicates, being accompanied by particular symptoms and particular products."—24, 25.

The author next proceeds to discuss the phenomena, seat, and especially that *questio vexata*—the nature of inflammation. Before entering upon these matters, however, we beg the reader's attention to the following passage:

"The *phenomena* usually enumerated as marking inflammation are redness, heat, pain, and swelling. These signs, however, are not constantly present, and, as might be supposed, they are liable to vary according to the nature of the exciting cause and the character of the part affected. But

these are not the only circumstances which occur in inflammation: in every case there is a perversion of the vital actions, attended with an altered state of the nutritive and secretory functions. To affix to these several conditions their respective value, it will be necessary to allot to each of them a considerable share of attention. Most writers, until recently, attached too much importance to some of them, and too little to others; whilst they entirely overlooked the fact that they are always greatly modified by the nature of the tissue in which the malady, of which they are the indices, is located. If we regard the four phenomena, redness, heat, pain, and swelling, referred to above, as being essential to the process, it will be at once perceived that there can be few inflammations; and we shall therefore be obliged, in describing diseases, to invoke other names, such, as irritation and fever; a blind adherence to which has unfortunately tended too much to retard the progress of pathological science. Boerhaave enumerated one hundred and fifty varieties of fever: had he enumerated a thousand more he would have been much nearer to the truth, for he might then have specified nearly every form of inflammation, whether occurring in the external parts of the body, or in the interior organs. The word 'fever' is a conventional one, and is employed to designate, not the nature or seat of a disease, but simply the phenomena which it manifests. So also with the term irritation. Mr. Travers and others have written extensive treatises on this subject; but have they pointed out any thing concerning the essential character of this disease? have they told us anything of the peculiar condition of the nervous and vascular systems which accompanies it? So far as I am acquainted with their labors they have not: and yet men continue to talk about irritation, with its numerous varieties, as if they had the most perfect knowledge of its nature, seat, causes, and symptoms. A course such as this cannot but have a most dangerous tendency in practice; for what one physician describes as a fever, another will consider simply as an irritation, a third as an inflammation, and in this way no principles can ever be introduced as standards of treatment. The practice of medicine must continue to ebb and to flow with every tide of professional opinion.

"The time, however, cannot be far off, when the term fever must be entirely discarded from our books, and diseases named according to the tissues which they implicate. Then, and not till then, can it be expected that the laws of deranged action will be properly interpreted, or fully compre-

hended. All diseases, I feel confident, will ultimately be found to have a local origin and habitation; and if this should ever be proved to be true, the whole class of febrile maladies, with its hundred varieties and subdivisions, will cease to have a place in our medical treatise."—25, 26.

Without being as sanguine as the author, we still have a hope that his anticipations may be realized.

The *seat* of inflammation is in the capillary vessels. By this term we are to understand, not a set of vessels perfectly independent of the remainder of the vascular system, but "minute tubes which are every where interposed between the arteries and veins," communicating directly with both. Various opinions have been held concerning their structure. Many have supposed that they were membraneless; in other words, that the blood, after leaving the arteries, coursed hither and thither in the substance of the tissues, in channels formed out of the tissue itself. Bichat, and after him Beclard, taught that they were formed of a single coat continuous with the inner arterial and venous coat. Our author argues from analogy that the three tunics distinguished in the larger arteries and veins, are continued—excessively attenuated of course—into the capillary vessels. Recent investigations with the microscope have shown this to be the fact. Wedemayer states that they can readily be seen in vessels as large as the tenth of a line; Schwann discovered transverse fibres in the smallest capillaries of the mesentery of the frog; and Henle, Mueller, Baly, and others, have all seen the membranous walls, delicate but distinct, sometimes with oval bodies like epithelium-scales in their substance.

"Viewed in reference to their caliber, the capillaries are divisible into two classes. The one embraces those minute tubules which, though invisible to the naked eye, are found, when examined with the microscope, to be capable of carrying a continuous stream of blood, so as to give the part in which they are located a red appearance; the other includes those delicate vessels, the cavity of which is so small as to admit only a single globule at a time, and which it is extremely difficult to detect even with a good magnifier. By reflect-

ing for a moment on the size of the red particles of the blood, estimated by most writers to be about the three thousandth part of an inch, the reader will be struck with the great tenuity of these vessels."—32.

The size of the capillaries is in general proportioned to that of the red globules of the blood. Their diameter appears to be uniform in the same organ, but varies in different organs from $\frac{1}{1000}$ to $\frac{1}{5000}$ of an inch, the mean being between $\frac{1}{3700}$ and $\frac{1}{1850}$ of an inch. The smallest, according to Weber, are found in the brain, where they are $\frac{1}{4700}$ of an inch. In the kidneys they are from $\frac{1}{2500}$ to $\frac{1}{1552}$; in the mucous membrane of the large intestine from $\frac{1}{2794}$ to $\frac{1}{1847}$; in the skin $\frac{1}{1150}$; in inflamed membrane from $\frac{1}{3640}$ to $\frac{1}{1923}$. In very young animals they are larger than in the adult, corresponding again to the red particles, which are larger in the former. They are smaller than any other tubes or ducts of the body. The biliary ducts, and the tubuli of the kidney, are several times larger than the capillary vessels. The primitive muscular and nervous fibres are a little smaller than the finest capillaries. These vessels are not equally numerous in all parts of the body.

"The parts which form the basis of the skeleton, together with the tendons, the cellular substance, the epidermis, nails, and hairs, have, comparatively, few of these vessels after the body has attained a certain degree of developement. In the early stages of life, however, most of these structures are highly vascular, and can be readily injected. The serous membranes appear to possess very few capillaries; in the healthy state, in fact, none can be discerned in them; yet, when inflamed, they are rendered highly vascular, and thousands of minute vessels, which before were invisible, are now perfectly distinct, giving the affected part a beautiful reddish aspect. The capillaries abound in the mucous membranes, the skin, the liver, spleen, lungs, and kidneys. They are also very numerous in the heart, the muscles of voluntary life, in the brain, and in the pia mater."—32.

The capillary vessels form a net-work in the meshes of which lies the proper substance of the organ or tissue. The

meshes differ in size and shape in different parts. They are smallest in the lungs, and in the choroid membrane of the eye; they are likewise very close in the mucous membrane of the lungs, liver, and kidneys, and in the true skin. In the lung the interspaces are a little smaller than the capillaries; in the kidney, the mucous membranes, and the cutis vera, the diameter of the capillaries is to that of the interspaces as one to four, or one to three.

The capillaries, thus constituted and arranged, are important agents in nutrition, secretion, calorification, and absorption. Fluids pass into them and out from them, not through open extremities, which they have not; nor yet through *exhalants*, or visible openings in their parietes, of which they are equally destitute; but in consequence of the porosity which they possess in common with all animal membranes. They are pre-eminently endowed with nerves, which must, of necessity, be involved in any affections of the vessels. To show the joint agency of the nervous and vascular systems in the production of inflammation, the author refers to the experiments of Magendie, Brodie, and Philip. The former cut the fifth pair of nerves at the varolian bridge, in the rabbit, and saw it followed by inflammation of the surface of the eye. When the nerve was cut at the petrous portion of the temporal bone, the inflammation was still more violent, and resulted in total destruction of the eye. Division of the pneumo-gastric nerves was followed by engorgement of the lungs and the effusion of serosity into their substance, and by inflammation of the stomach. Brodie tied the brachial plexus of nerves, and the remote parts of the limb were attacked by inflammation, which resulted in gangrene.

In the author's view the first step in the process of inflammation is an altered sensibility of the part, produced by some hurtful agent. This local impression being reflected upon the cerebro-spinal axis, and through this upon the heart, the latter is incited to increased action, and more blood flows to the part concerned than it naturally receives, at the same time that the capillaries are dilated.

"The phenomena above alluded to, namely, the preternatural influx of blood, and the dilatation of the capillaries, can be easily detected by exciting irritation in the mensentery of a rabbit, the tale of a tadpole, the fin of a fish, or the web of a frog's foot, parts which are perfectly transparent, and therefore well calculated for the purpose. On viewing these structures with a microscope, in the sound state, numerous channels will be observed filled with blood, the red globules of which roll along in the most regular and beautiful order. If they be now irritated with spirits of wine, hot water, or diluted acid, the little rivulets just referred to, will be found to become dilated, from the manner in which the blood is crowded into them by the heart, which, in order to remove the local difficulty, is excited into sympathetic action. In a few minutes hundreds of vessels, which were previously invisible, will be seen shooting out in different directions, and connecting themselves with the sides of those that appeared in the first instance. These are not new channels, but old ones appertaining to the second class of capillaries, which are rendered evident by the intromission of red particles, which are either excluded in the healthy state, or pass along in so slow and gradual a manner as to elude the eye of the beholder. The little bodies which are thus introduced do not circulate, at first, with the same facility as in the other parts of the body; for, as the dilation of the little rivulets takes place by degrees, they have to force their way, and hence, after having advanced a short distance, they retreat slightly immediately after each pulsation of the heart, rebounding, as it were, upon each other. In this manner they travel on, surmounting every obstacle, until they finally reach the corresponding capillary veins, into which, as they are considerably more capacious, they rush, as into a vortex. * * * * *

"Such are the initial steps of inflammation. If the process be now checked by the removal of the exciting cause, the phenomena referred to gradually disappear, and the part recovers its natural tone and condition.

"If, on the other hand, the inflammation be allowed to proceed, another series of changes may be witnessed, surpassing, if possible, in point of interest, those just described.—The circulation now completely ceases; the blood assumes a dark modena color, and the coats of the vessels are rendered so soft as to be liable to give way on the slightest force. With these alterations the healthy functions of the part are suspended: it is red, hot, painful, and tumid; and its molecular intervals are filled with serosity, lymph, or pus. In this stage of the malady, the capillaries contain thick, viscid,

partially clotted blood, which adheres with great tenacity to their inner surface, and opposes an effectual barrier to artificial injection, or to the removal of the fluid by pressure or ablution. * * Occasionally, again, the blood escapes from the vessels, and, forcing its way along the cellular tissue, forms new channels, through which it afterwards continues to circulate. This interesting phenomenon, which has been frequently noticed by Kaltenbrunner in the inflamed mesentery of the rabbit, is strictly analogous to what occurs in the organization of adventitious membranes, a subject to which the attention of the reader will be subsequently directed.

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"Another striking phenomenon is the distended condition of the larger vessels leading to the inflamed part. When the disease is at its height, the congestion often extends to a considerable distance; the blood is unnaturally dark, thick, and viscid, and artificial injection is difficult, sometimes impracticable."—34, 35, 36.

This description of the changes in an inflamed part, though brief, is in the main correct. It is right, however, to observe, that the stagnation of blood is partial, occurring here and there in points only of the affected part, as if the *onus* of the inflammatory action fell more particularly on these points. It is not universal unless gangrene is imminent. It must be remembered, also, that this description answers to traumatic inflammation.

Let us go back now (for, to suit our own convenience, we have slightly changed the author's arrangement) to the phenomena usually enumerated as marking the occurrence of the changes just described. And first of the discoloration, which varies from the slightest rose to the deepest purple.

"There are are some tissues which naturally contain little blood, or which convey only serosity, and these, of course, are never much discolored when affected with disease. The tendons, ligaments, and cartilages are seldom reddened, no matter what may be the intensity of the inflammation. In the fibrous membranes, such as the pericardium, the dura mater, and sclerotic coat of the eye, the discoloration is usually of a lilac or purple hue, with a shade of blue. In the mucous lining of the alimentary tube, the redness, in the early stage

of the disease, is bright and florid, like that of arterial blood; but, as it progresses, it often assumes a dark violet, or black appearance, especially when it is about to pass into gangrene. A striking exemplification of the truth of this remark is afforded by the mucous membrane of the fauces in the malignant form of scarlatina. In the beginning of this disease, the tonsils and adjacent parts are of a bright red, which is often, in the course of a few hours, converted into a deep purple. In the skin, the redness is sometimes of a scarlet color;at other times, it has a yellow tinge, with various shades of mahogany. The yellow color is most commonly witnessed along with derangement of the liver; hence the frequency of its occurrence in the latter stages of erysipelas and anthrax. In inflammation of the pleura and peritonæum, the redness is, at first, of a lilac hue; afterwards of a scarlet, brownish, or violet. In the arachnoid there is rarely, if ever, any perceptible discoloration.

"Inflammation of the spleen and liver is attended with a purple hue: when the brain is affected, the color is generally rosaceous, cineritious, or like the lees of wine. The salivary glands are usually of a pink complexion; the kidneys of a deep violet; the testicles and ovaries of a reddish yellow. In the lungs the color varies from the slightest rose to the deepest purple."—26.

The discoloration assumes various forms, as the arborescent, the capilliform, the punctuated, and the blotch-like. Sometimes, in the inner coat of the arteries for example, it is uniform, as if it were dyed into the part. In all cases it is owing to the unnatural influx of red globules, and is of a brighter or darker hue, according as the globular movement is quick or slow.

Hunter's experiments led him to believe there was no preternatural development of *heat* in inflamed structures. Subsequent investigations have shown that the reverse sometimes obtains. According to experiments made by the author, the average temperature of the blood in health is 96° (usually stated at 98°) whilst in disease it sometimes falls as low as 92°, or rises as high as 104°. The heat of the body is certainly subject to modifications. Home found the oviduct of a frog ready to spawn two degrees hotter than the heart; and,

according to Dunglison, the uterus during labor may have a temperature of 104°. The doctrine of the day is, that animal heat is generated by the union of oxygen with carbon and hydrogen in respiration and the organic processes. Nevertheless, as our author remarks, it must be influenced by the nervous system, and hence any alteration in the innervation of a part would be attended by a change of heat, either *plus* or *minus*. In erysipelas, furuncle, and anthrax, the thermometer has been seen as high as 107°. In an inflamed scrofulous tumor Becquerel and Breschet found the temperature raised 5¼° above that of the body. In the ligaments, bones, cartilages, fibrous membranes, and tendons, the extrication of heat is slight.

Pain, one of the most important symptoms, varies, like redness, according to the nature of the part affected. It is most keenly felt in the parts most highly endowed with nerves and vessels. Bones, ligaments, tendons, cartilages, and fibrous membranes, do not evince much sensibility in the healthy state, but are exquisitely sensitive when inflamed. In the different viscera, inflammation of the coverings is far more painful than that of the proper structure. In inflammation of mucous membranes pain is sometimes excessive, sometimes absent; the ulcers in the ileum and colon during phthisis, afford an instance of the latter. Pain is much greater at the mucous outlets, where these membranes join the skin, and is owing to such parts being supplied with nerves from the cerebro-spinal instead of the ganglionic system. Pain varies in character: it is persistent, intermittent, or periodical; is sharp and lancinating in the pleura, acute and pulsatile in the cellular tissue, obtuse and gravative in the glandular organs, prurient and smarting in the skin, dull and gnawing in the bones, throbbing when pus is about to be formed.

Swelling, caused by engorgement of the vessels and the effusion of new matter—serum, lymph, pus, or blood—varies according to the vascularity and laxity of the part. It is well marked in the cellular substance, but is quite absent in the skin, ligaments, tendons, muscles, serous and fibrous textures,

cartilages, bones, and in many of the viscera. In the mucous membranes, it occurs at the vulva, mouth of the larynx, and in the ocular conjunctiva, though here it is really in the submucous cellular tissue.

"From the hasty survey which has been taken of these symptoms, we are authorized to conclude that they are by no means entitled to the stress which has been generally placed upon them by writers. In many instances there is an entire absence of at least one or two of them, and yet the part is absolutely in a state of high inflammation. How often does it happen, that enteritis is lighted up, and goes on to destructive disorganization, without even the slightest indication of its presence! In arachnitis, the only symptom, frequently, is severe cephalalgia, with delirium and partial paralysis. The patient dies, and, on examination, the membrane is found to retain its natural thinness, and to be as free from injection as in the sound state. In such a case, should there be but little effusion of serum and fibrin, a superficial observer might conclude that there never had been any inflammation, or that what he saw was the result solely of irritation. The injurious tendency which such a mode of procedure would exert on the practice of medicine is too obvious to require any comment in this place. In reasoning on this subject, the physician should constantly bear in mind the important fact, that the symptoms which have been enumerated above, although they are frequently all present, are not necessarily so, and that the absence of some of them is not a sufficient proof that there does not exist inflammation. By such course alone can he expect to escape error."—29, 30.

But there are other symptoms still, insisted on by the author as attending all inflammations. "Perversion of the vital function" is rarely absent, and is generally greatest when inflammatory action is most severe, from which period it gradually subsides. Sometimes it is the only symptom present. Gastritis, for example, will be shown by nothing but frequent irritability; duodenitis, by arrest of chylification; hepatitis, by scanty and vitiated bile; nephritis, by the absence of urinary secretion. The function of absorption is also affected: strychnine in solution has been applied with impunity to an inflamed serous membrane, and prussic acid to the conjunctiva,

the schneiderian membrane, and the mucous lining of the vagina. In other cases the alteration is not so extreme. Morphia applied to the skin inflamed by a blister tranquillizes the system; diluent drinks, such as gum water, moderately given, are absorbed by the inflamed stomach. Nutrition is likewise perverted: an inflamed organ becomes atrophied, the particles which nourish it being withheld; or the molecular arrangement is changed, there is an alteration of color and consistence—in other words, there is softening.

Leaving the subject of inflammation for a time, it is necessary to inquire into the causes capable of producing congestion and discoloration of the tissues "immediately prior to, during, or subsequently to, the extinction of life." The causes acting before death may be referred to mechanical obstructions to the free return of blood, and to the effects of stimulating agents taken as food, drink, medicine, or poison. The latter will be considered in another part of the work. As to the former, the obstruction may arise from a tumor, some morbid deposit, or the obliteration of a vessel; or, what is still more common, from organic lesion of the cardiac, the pulmonary, or the aortic valves, the ariculo-ventricular apertures, or the mouth of the pulmonary artery and aorta. All these are unquestionable causes of congestion, but, the congestion being permanent, it is by no means so clear, in the opinion of the author, that it does not induce actual inflammation.

"However this may be, it seems to me that pure, uncomplicated congestion, in whatever parts of the body occurring, must uniformly depend upon one or other of the following circumstances: 1. Obstruction of the heart and great vessels, by the formation of fibrinous concretions during the last struggles of life. 2. Partial paralysis of the heart, disqualifying it, to a greater or less extent, for carrying on the circulation. 3. Asphyxia, whether induced by actual strangulation, the inhalation of deleterious gases, or difficult dissolution in ordinary sickness."—37.

The congestion arising from the first two classes is generally partial, and limited to the more dependent portions of the

body. That arising from asphyxia pervades the entire body, and is very conspicuous in the skin, lungs, heart, and great vessels, and where the skin and mucous membranes unite. In both cases the discoloration is of a dull bluish tint, and is more uniform than that of inflammation.

After death, discoloration may be produced by gravitation of the blood, and by its transudation, or that of some of its elements, through the walls of the vessels. The discoloration arising from the former cause (the *hypostatic hyperæmia* of the French school) is usually situated on the posterior parts of the body, but may be produced in any situation by placing the cadaver in a particular position. It is most conspicuous in organs where capillary vessels abound; and, as the subject usually lies, is observed in the posterior part of the lungs, liver, and kidneys, in the lobes of the cerebellum and those of the cerebrum, in the occipital portion of the cerebral coverings, and their continuation in the spinal canal, in the most dependent part of the stomach, and the folds of intestine which are most dependent, and in the skin on the back part of the neck, trunk, and extremities. The hue varies as in inflammation from slight rose to deep red, but is generally fainter and more uniform, and may be removed by pressure or ablution. It depends on dark-colored blood, generally fluid, sometimes partly coagulated, contained in the smaller veins, and these can generally be traced to larger vessels filled in the same way.

Discoloration from transudation is generally connected with the putrefactive process, and hence, unless in warm wet weather, is rarely observed until twenty-four hours have elapsed. The fluid (which is the serum and the coloring matter of the red globules rather than the blood itself) after percolating the vessels, is diffused among the surrounding tissues, rendering them unnaturally red and moist; or forms red bands, patches, streaks, points, or aborescent lines; or it may collect in the different serous cavities, as in the cerebral and spinal arachnoid, the peritonæum, or the pleura. The redness is generally of the scarlet hue; in the lining membrane of the heart,

arteries, and veins, it is a mere scarlet stain, frequently uniform, sometimes figurate, and readily distinguishable from inflammation by the absence of other alterations. The arborescent redness is frequently observed in the stomach and bowels, where it corresponds to the large veins; the same appearance may be observed in the skin of the posterior parts of the body. This scarlet hue is at length lost in the muddy, brownish, and greenish appearances of advanced putrefaction—a change which takes place soonest in warm weather and in plethoric subjects. Another source of cadaveric coloration is exposure to atmospheric air. Warm weather and the direct solar rays are most favorable to its production; it is observed in the spleen, liver, kidneys, and heart, the inner arterial and venous coat, and the alimentary mucous membrane. The redness is of the bright arterial hue, and is diffused over a large surface. In the stomach and bowels it sometimes assumes the appearance of small florid specks. It is attributed to absorption of atmospheric oxygen, and, by immersion in a gentle stream of water or in dilute vinegar, is changed to a dark purple.

The physician should be able to distinguish the congestion and discoloration produced by these causes from those of inflammatory origin, but it is not always easy.

"Should there be merely some degree of redness, with ramiform injection, traceable to some large venous trunk, unaccompanied by effusion, softening, opacity, induration, thickening, or ulceration, the presumption is strong that these appearances are the result solely of congestion, produced by some one or more of the causes previously pointed out. If, on the other hand, the discoloration and vascularity are associated with some, or all, of the anatomical characters here indicated, it must be concluded that they are dependent upon inflammatory irritation, since they afford the best possible evidence of the existence of that lesion."—39.

After a glance at some of the hypotheses that have been put forth concerning the nature of inflammation, Dr. Gross proceeds to treat, in distinct chapters, of the different terminations of the process. In reference to *acute* inflammation

these are, effusions of serum, lymph, pus, and blood, together with softening and gangrene. Except the last, these are in fact *conditions* of inflammation, not terminations, and indicate so many degrees of the process, constituting a sort of "phlegmasial scale." The chief conditions or terminations of *chronic* inflammation are, ulceration, granulation, cicatrization, and induration. Hemorrhage, softening, and gangrene, may likewise attend the chronic variety, but the occurrence is rare.

CHAPTER II—Is devoted to the *effusion of serum.* This is one of the most constant attendants of inflammation, whether simple or specific, acute or chronic, mild or intense. It is most frequently seen in the cellular tissue, in organs where that tissue is abundant, and in the serous cavities. The denser structures, as tendons, ligaments, aponeuroses, cartilages, and bones, the liver, kidney, womb, and prostate gland, afford very little. The brain, spinal chord, nerves and vessels, furnish it very sparingly. The mucous membranes in certain diseases pour out a large quantity; in the skin, it is observed in the vesications preceding gangrene, and in those consequent on certain irritants. It is likewise contained in hydatids and serous cysts.

The effusion is essentially the same in whatever organ or texture it occurs, and both in physical properties and chemical composition is analogous to the serum of the blood. Like it, it is sometimes as colorless as the purest rock-water; then it has various shades of yellow and red, from admixture with the coloring matter of the red globules and that of the bile. Occasionally it has a greenish tint, and that poured out by the peritonæum, in cases of strangulated intestine, is of the color of coffee-grounds. Like the serum of the blood, it consists of a large quantity of water (800 or 900 parts in 1,000) a variable quantity of albumen, some muco-extractive matter, muriate and sulphate of soda, phosphate of lime, iron, and magnesia. The quantity of albumen varies from eighty parts in a thousand to a mere trace. In the fluid of hydrocephalus and hydrorachitis, the amount is scarcely appreciable. In some

instances it has been found to contain cholesterine and uric acid.

The specific gravity of the fluid is generally less than that of the serum of the blood. The quantity varies from a few ounces to many gallons. Sometimes it is poured out with great rapidity, as after the stings of certain insects, and the bites of venomous reptiles; and in certain cases of pleuritis.

Our author teaches not only that an effusion of serum is an accompaniment of all inflammations, but that it never takes place without inflammation. The serous effusions attending obliteration of the veins are generally adduced as examples arising from a purely mechanical cause. For example, if one of the femoral veins be obliterated, or compressed by a tumor, there is an œdematous condition of the corresponding extremity. If the obstruction exists in the ascending hollow vein, it will be followed by effusion in both extremities; if in the descending, by œdema of the upper half of the body. If the portal vein be obstructed or obliterated, the collection takes place in the peritonæum; if the obstacle exist in the heart itself, there is a general tendency to dropsical effusion in the whole body. Now copious accumulations of fluid are observed in many of the cavities where the local and general symptoms during life attest the presence of the inflammatory process, but where, after death, no increased vascularity, no patches or bands of lymph, nothing in fact but a little opacity, can be found. These instances are not unfrequent; and therefore the non-existence of inflammation must not be predicated of the absence of these symptoms.

"Such, then, being the difficulty of recognizing the presence of inflammation, where every symptom during life gives indubitable evidence of its existence, can it be wondered at that, in the instances above referred to, pathologists should still consider the effusion of serum as the result merely of mechanical obstruction? The question may now be asked, can such an obstruction exist, to any considerable extent, without producing a state of parts analagous to, if not really indentical with, inflammation? I would answer, no. Let it be supposed that the obstacle exists in the ascending hollow vein. This

vessel is destined to return the blood from the inferior extremities, the pelvis and abdomen, to the right side of the heart. But, failing in the accomplishment of this object, from the difficulty adverted to, the blood is interrupted in its passage upwards, and congestion of all the vessels, both large and small, is the result. This congestion is not transient, but permanent; and it is scarcely reasonable to presume, judging from our knowledge of the circulation, that this state could exist long without producing an altered condition of the sensibility of the parts affected, attended with more or less redness, and effusion of serosity. The peritonæum and cellular tissue of the limbs are the structures which bear the onus of the obstruction, and these, it is well known, are parts which are most liberally supplied with serous capillaries. But, it may be said that the effusion may result from perverted action, from irritation, or disturbed function: all this may be true, and yet not in the least invalidate our position. Every body knows that in inflammation, there is perverted action, or deranged function, with irritation, or altered sensibility. These terms, therefore, if they mean any thing at all, only denote certain conditions—not the cause of these conditions; as redness, heat, pain, and turgescence are not inflammation, but only so many symptoms of it."—44.

A scirrhous tumor of the liver, situated so as to fret the serous covering, is attended by ascites, even though the portal circulation is free; so hydrothorax is induced by tubercles of the lungs, hydrocele follows upon carcinoma of the testicle, hydrocephalus succeeds heterologous growths of the brain. In these and similar cases the morbid deposit, in the opinion of our author, acts like a foreign substance, causing inflammation in the serous lining which results in an effusion of serum. C.

[TO BE CONTINUED.]

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Use of the Ergot of Rye. By J. Hall Davis, M.D.—The efficacy of ergot of rye, as an excitant of uterine action, and a safe one under certain conditions, is now, I apprehend not doubted for a moment by those members of the profession who have had ample opportunities, from their connection with lying-in institutions, of sufficiently testing the merits of the drug. For my part, I can bear witness to its worth, when administered under proper precautions, and in no single instance have I found ill effects from its use. In improper cases, by virtue of its power it is undoubtedly capable of doing infinite mischief. The pains which it excites are continued, and much more powerful than the natural parturient throes; hence the violent respiratory efforts occasioned by it, would be apt to determine, in a plethoric subject, disturbance of the function of the brain; in a subject of heart disease, more surely an interruption of the functions of that organ. Under circumstances of a more than ordinary resistance to the agents of labor, from rigidity of the soft parts, or confinement of the pelvic space, the ill-judged exhibition of the medicine would be attended by an infinite risk of a rupture of the uterus and vagina. At a meeting of one of the medical societies in London, for the satisfaction of a member, and an unbeliever in the power of the drug, the uterus, just removed from a woman who had died of a rupture of the organ, was exhibited—that deplorable accident appearing to have resulted from the administration of the ergot of rye in an improper case; and there are not wanting other instances on record of the like result. It has been believed by some to destroy the child by a poisoning influence, but I

cannot discover any conclusive evidence in support of this assertion. Where the child has been still-born, it is my conviction that its death has arisen from an arrest of its circulation by inordinate pressure upon the body of the child and the funis; from the exhibition of the medicine in a case of more than ordinary resistance to the agents of labor, consequently under improper circumstances, or from some other cause quite accidental, and unconnected with its action.

The medicine is exhibited under various forms, in powder, with cold water, in infusion, decoction, and tincture.

In my own practice, I have preferred the infusion of the fresh powder in half-drachm doses, given every quarter of an hour. I have known a single dose suffice; but two, three, four, or five may be necessary. I do not exceed five or six doses; that amount failing more will be useless. Very frequently after the quantity necessary has been taken, the contents of the stomach are rejected; but then, generally, the medicine will have been retained sufficiently long to secure the object of its administration. The drug, having been given under a proper condition of the patient for its use, may be inefficient from the idiosyncrasy of the patient, as in the case of various other medicines, or from its being of a bad quality. It should present an ash-colored powder, possess a peculiar smell of its own, and form a dark violet infusion.

Upon the present occasion I shall confine my remarks to the exhibition of the ergot in labors at the full period of gestation, prior to the birth of the child, unattended by hæmorrhage; and, at a future opportunity, communicate a paper upon its application in tedious abortions, premature labor, upon the question as to its power of originating uterine action; and in uterine hæmorrhage, under certain circumstances, at all periods of pregnancy and labor; as also in the instance of morbid deposits, hydatids, moles, &c., in the uterine cavity. The following are the conditions required for its safe employment in tedious labor at the full period of gestation.

1. The soft parts lax, and free from heat.

2. With rare exceptions the orifice of the uterus should be fully or nearly fully, dilated, and always dilatable.

3. The pelvic space should present the average good or standard dimensions.

4. In head presentations only; in breech and footling cases it is objectionable, on account of the very gradual descent of the presenting parts required for the subsequent passage of the head, without risk to the cord; in transverse presentations it is obviously improper.

5. The head should be in an average good position, and not be impacted.

6. The inertia of the womb should not have for its source a state of plethora, to be recognized by the obvious indications of that condition.

7. The absence of any source of irritation in any other organ capable of disturbing the parturient function by reflex action, should be first ascertained, as of fæcal accumulations, urine in the bladder, crude ingesta, to be met by their obvious indications of treatment.

8. The uterine inertia should be ascertained not to depend upon disturbance of the nervous function from loss of rest, or from depressing emotions, as great anxiety, painful anticipation, want of confidence in the attendant, &c.

9. There should not be present any cause of distention of the womb beyond its power of acting to advantage, as by excessive quantity of liquor amnii, twins.

10. It would not be indicated when the inertia, arose from constitutional weakness, to be preferably met by appropriate constitutional measures.

11. It is very rarely advisable to employ the ergot in the labors of those who are parturient for the first time; for myself, I have never given it in primiparæ; much time, and a slower action of the parturient powers, being required, than is consistent with the effects of the medicine.

In short, this remedy being indicated on account of inertia of the womb, arising from the effect of previous distentions of the organ, or from no ascertainable cause, there should be, for its safe exhibition, a natural presentation, a pelvis of ample dimensions, a free passage in other respects, the soft parts relaxed, and dilatable, nothing wanting, in a word, but efficient action of the uterus to finish the labor.—*London Lancet.*

Peculiar Symptoms from Tape-worm.—Dr. Steinbeck observed in a woman 22 years of age a strange case of vertigo, with continual humming in both ears, for which she could assign no cause whatever. The complaint had already lasted a year, and many internal and external remedies had been employed, but with no benefit. The humming appeared first, increased gradually in strength, and was at last accompanied with the giddiness before mentioned, which occurred from two to four times a day. Congestion of blood to the head being the supposed cause, leeches, foot-baths, and pur-

gatives were employed. After the patient had been treated inefficiently by the above remedies for four weeks, the author was called in, and considered the disorder to proceed from abdominal nervous derangement. He ordered, therefore, antihysterics, but to no purpose. All on a sudden violent vomiting ensued, which yielded at length to prussic acid. The patient took two drops every two hours, when the vomiting ceased after a few doses, and the patient felt a certain ease, which she had not perceived for two years. The nervous abdominal symptoms—retching, humming, and giddiness—had entirely vanished. The cause of these complaints soon became evident, for on the following day a perfect, dead tape-worm, fifteen yards long, was evacuated, though the want of the usual helminthic symptoms neither suggested to the first physicians nor to the author the proper diagnosis. The strong doses of prussic acid had undoubtedly killed the worm. Since the latter has been evacuated, the woman is perfectly healthy, and no longer suffers from the previous giddiness or humming.—*Ranking's Abstract* from *Pr. Vereinszeitung*,—*Med. News.*

Creosote in Dysentery.—In a severe form of dysentery which occurred near Tunbridge Wells, and in which all methods of treatment appeared unsuccessful, the mortality being as high as 25 per cent., Dr. Wilmot thought of trying creosote enemata in the strength of ʒi. to ℥xij. of starch. This remedy produced a speedy amelioration of the disease. *Ibid.*

Danger of Arsenical Injections in Subjects intended for Dissection. By M. Benoit.—As arsenical injections are very often used now to preserve bodies for dissection, it is right to be aware of the dangers resulting from the practice. At a *concours* held lately at Montpelier, six bodies were given for dissection, five of which were injected with an arsenical solution of the strength of about 900 grains of arsenious acid to about 2¼ pounds of water. The five gentlemen to whom these injected subjects were allotted were attacked with severe symptoms of arsenous poisoning, as drowsiness, colic, diarrhœa, vomiting. All, too, were affected with a severe and continuous lancinating pain at the extremities of the fingers. The pain had its chief seat in the bulb of the finger

and the circumference of the nail. The painful part was visibly swollen, and an appearance resembling ecchymosis was perceived through the nails, which were afterwards cast off. These five individuals were also troubled with uneasy tremors of the upper extremities. They all recovered. It is asked whether these symptoms, especially the pains in the fingers, were produced by the direct absorption of the poison, or by breathing the arseniuretted hydrogen, which it has been ascertained animal bodies exhale when preserved by means of arsenic? Perhaps both causes had their share in the production of the symptoms.—*Ed. Med. and Surg. Jour.* from *Jour. de Pharm.*

Introduction of Extract of Belladonna and Gummy Extract of Opium into the Urethra in Incarcerated Inguinal Hernia. By Dr. Tronsone.—The taxis, application of ice, venesections, clysters, &c., having all been employed in vain in a case of incarcerated hernia, in which the operation was obstinately refused, the author resorted to the method recommended by Riberi, by injecting into the urethra a mixture of ten grains of extract of belladonna and six grains of gummy extract of opium, by means of an elastic catheter, and applying some of the mixture to the hernia itself. Within a few hours after the injection the hernial swelling had disappeared, and all incarceration was removed.—*Medical Times* from *Schmidt's Jahrbuch.—Ibid.*

Clinical Lecture, delivered at the Meath Hospital. Pneumonia in Children. By R. J. Graves, M.D., &c.—The next case to which I shall call your attention is that of J. Duffy, a little boy, who, on the first of this month, was attacked with symptoms of fever followed by thirst, nausea, and vomiting. On his admission, six days afterwards, we found him complaining of headache and sleeplessness, but the fever, thirst, and abdominal symptoms had disappeared. The weight of the disease seemed to have fallen chiefly on the respiratory system, for he had loud, hard, incessant cough, increased by motion, a suspicion of the existence of pneumonia struck me, and on applying the stethoscope under the right scapula, I found extensive dulness, absence of the respiratory murmur, and crepitus. Over all the rest of the thorax respiration ap-

peared to be clear and natural, but here, instead of the clear sound, we had nearly complete absence of respiration, with slight crepitus. The disease was therefore fever complicated with extensive inflammation of the postero-inferior part of the lung.

Now inflammation of the parenchyma of the lung, when it attacks children, presents some remarkable points of difference from the same disease in the adult.

I am not at present prepared to enter upon an explanation of the pathological differences which exist between the pneumonia of infants and children below the age of three, and children above that age; certain it is that important differences do exist, and that also inflammation of the lungs in adults is essentially different from both. Again, in persons advanced in years a fourth variety of pneumonia occurrs, whose features are very characteristic and peculiar. Observe gentlemen, when I assert that inflammation of the lungs assumes different characters, according to the age of the individual attacked, I am touching on a practical point of the greatest importance, for I have no hesitation in adding that the same mode of treatment is not applicable to any two or three varieties of pulmonary inflammation. Thus mercurial salivation rapidly produced is our sheet-anchor in the pneumonia of adults and persons in the vigor of life, but such a method of treatment cannot be applied either in infants, children, or in old persons. Again, in the pneumonia of children above three years old, nauseating doses of tartar emetic. persevered in with judgment, and combined with bloodletting, leeching, blistering, &c., are chiefly to be relied upon, whereas in infants a perseverance in the exhibition of tartar emetic for more than one or two doses is inadmissible, while minute doses of calomel, ipecacuanha, and chalk, exert a most beneficial influence on the complaint. In infants, too, there must be much more caution exercised with respect to the detraction of blood; but, gentlemen, I find that this subject have not yet been examined with that attention it deserves, and that consequently we cannot lay down general rules for your guidance. Certain I am that much remains still to be done concerning the best means of treating inflammation of the lungs according to the age of the patient. A very good foundation for the pathology of this disease in infants and children has been laid down in an essay by Gerhard, which you will find detailed in a former number of the Dublin Medical Journal.

In the case before us there were some circumstances worthy of remark, as being calculated to make a false impression, and to prevent us from following the only mode of treatment likely to produce relief. There was no febrile action present, and the pulse was only 72, soft and regular. There was scarcely any heat of skin, the bowels were natural, and he had some appetite; the only circumstances indicative of general disturbance of the system were some foulness of tongue and want of sleep. Here the state of the pulse and skin, with the absence of fever, would be likely to mislead the practitioner, and cause him to overlook the real nature of the disease. I need not tell you, gentlemen, that this would be a very important error; the spontaneous efforts of nature would be totally inadequate to its removal, and it would in all probability terminate fatally.

You may perhaps ask, whether the state of pulse, observed in this boy, be a good or bad sign. If we look to nosological arrangements, we shall find that pneumonia is generally accompanied by a strong quick pulse, in fact that this is its natural condition under such circumstances, and therefore we should say that the slow and tranquil state of the pulse in this case, was not a good sign. But my impression is that, *cæteris paribus*, the quieter the pulse in pneumonia, the better. It indicates a disease of less violence, and much more amenable to treatment. The worst cases I have seen, all those cases of young and healthy individuals which terminated fatally in spite of active treatment, were cases characterized by high excitement of the circulation, and where bleeding, leeching, and tartar emetic failed in overcoming the hardness, or abating the velocity of the pulse. Thus in a case which I saw with Mr. M. Colles, and where the patient was a powerful strong man, bleeding after bleeding failed to diminish either the frequency or the hardness of the pulse, neither did the most energetic measures in the slightest degree seem to check or even retard the progress of the inflammation, which, producing a rapid hepatization of one portion of the lung after another, soon proved fatal; so great was the arterial action in this case, that all the superficial veins of the hand had a distinct pulsation communicated to them. On the contrary, when the pulse is soft and slow, the disease, though likely to be latent, and thus give rise to error, is generally under the influence of ordinary treatment. Wherever the pulse remains quick and hard after the employment of free antiphlogistic treatment, your prognosis shoul always be doubtful if not unfavorable.

In treating this boy's case I did not order general bleeding, for no matter where the inflammation may be situated, if it has no effect on the general circulation, if it be unaccompanied by increase of pulse and heat of skin, you may dispense with venesection, for it will not do any good. Here your means of treatment should be cupping, leeches, blisters, and the internal use of antiphlogistic remedies. I have ordered this boy to be leeched and blistered; and to take small doses of mercury. I beg leave to observe here, that in exhibiting mercury for pneumonia in children, or boys under the age of puberty, I do not, as in the case of adults, prescribe it in large doses, or with the view of producing a decided action on the system. In the pneumonia of adults, calomel is given in very large doses (I sometimes give it in scruple doses twice a day), with the view of inducing sudden salivation, because we know from experience, that there is nothing which checks so rapidly the progress of inflammatory action. It is true that mercury will occasionally stop the further progress of pleuritis or pneumonia without having affected the mouth, just as we now and then observe the removal of syphilis without actual salivation. But, generally speaking, when you give mercury to cure syphilitic iritis, common pneumonia, or pleuritis, its action is more favorable and more decidedly curative, when it operates fully on the system, as denoted by the affection of the breath, gums, and salivary glands. This, however, is not the case with respect to children or boys under the age of puberty. Mercurialization has not the same beneficial influence on the pneumonia of early life, as at the adult period, and I believe the same remark will be found to hold good with respect to the aged. Certain it is, that in very young children and infants it is scarcely possible to affect the gums, mouth, and salivary glands, in fact to establish a true sore mouth and fetid breath by means of mercury; with respect to the aged I cannot affirm positively, that the same observation applies, but this I know, that large doses of mercury, calomel for instance, do not cure inflammations in old people with anything like the certainty they display in the inflammations of young adults, or of the middle aged. In the present case I have given calomel in small doses, combined with ipecacuanha. It is my intention to carry it so far as to affect the system, and I have combined it with ipecacuanha because its administration in this way has been found exceedingly useful in the bronchitis and pneumonia of children. We attempted here the resolution of the pneumonia by leeching, blistering, an antiphlogistic regimen, and the

use of calomel and ipecacuanha, half a grain of the former and a quarter of a grain of the latter, every fourth hour. This acted twice on the bowels, and it is very probable that this soluble state will continue. Yesterday I ordered eight leeches to the chest, and when the bleeding ceased, eight more were to be applied. To-day, I have ordered twelve more. When you apply leeches to the chest in children, you should not rest content with merely ordering them, you should know how they are applied. There is a vast difference between merely prescribing remedies and seeing them properly employed. It too often happens that this powerful means of checking inflammation is rendered inefficient or even injurious by want of attention on the part of the physician. The leeches are ordered and sent from the apothecary's, but they are applied by an inexperienced mother or a bungling nurse. They are put on one after another anywhere they may chance to take, very seldom over the proper place, and during the whole time they remain on, the child's chest is left quite naked. This needless exposure of the chest is further increased by the habit of applying fomentations after the leeches have dropped off; the child gets fresh cold, and when the physician comes next day, he finds matters worse than before. The best wry of applying them is to put them into a small box made of fresh deal shavings, such as is sometimes used for pillboxes, and place this exactly over the inflamed part. Having thus applied them over a circumscribed space, you may draw the bed clothes gently over the child's chest, and he may remain covered until they are about to drop off, instead of fomentations, order a warm dry sheet or large piece of flannel to be placed over the chest, and in this way you will be able to get a large quantity of blood without exposing the child to the risk of cold. You may perhaps think these observations unimportant and even superfluous, but I am convinced that I have seen lives lost for want of proper care and expertness in the performance of an operation apparently so easy.—*Med. News.*

Placenta Prævia treated by Professor Simpson's Method. By J. Jones, Esq.—Having read Professor Simpson's interesting paper on placental presentations, wherein he recommends extraction of the placenta before the birth of the child, I determined to give the practice a trial the first opportunity that presented itself. I soon happened to have the

following case, which appears to me to prove satisfactorily, as far as can be judged from an isolated case, the superiority of the new over the usual mode of procedure under these appaling circumstances; at least, inasmuch as the safety of the mother, which should be the chief object of our solicitude, is concerned.

I was summoned, on the 14th of March, to a poor woman in labor of her sixth child, who was represented as having profuse hæmorrhage, which had continued almost interruptedly for about four hours. On my arrival, I found my patient in a most precarious state from exhaustion, with a pulse averaging from 130 to 140; she was almost speechless, slightly delirious, and there was no uterine action. There was then no hæmorrhage. I was informed she had had repeated slight attacks of hæmorrhage for six weeks previously. Having rallied her with twenty drops of tincture of opium combined with weak brandy and water, I proceeded to make an internal examination. Before I could exactly ascertain the state of the parts, I was deluged with a frightful gush of blood. The os uteri was fully dilated, the membranes entire. the presentation of the head natural: and the placenta covered nearly two-thirds of the os uteri. The hæmorrhage persisting, and there being now considerable uterine pains, I saw no time was to be lost. I accordingly, and without the least difficulty, insinuated my fingers between the adherent portion of the placenta and the uterus, and in less than a minute, the latter was freed of the placenta. I now administered a full dose of the tincture of ergot, which brought on strong expulsive pains, and the woman was delivered of a still-born child in one hour and thirty-five minutes after my entering the house. After the placenta had been extracted, I do not think she lost altogether, more than a teacupful of blood; she recovered as soon as females generally do after an ordinary labor, excepting that she continued unusually weak for a considerable time, as was to be expected after the great loss of blood. She had had one similar labor before; the the child was then turned with great difficulty (her pelvis not being capacious), peritonitis ensued, and she very narrowly escaped with her life, after a confinement to her bed of more than two months.

This case needs no comment; the facts speak for themselves. To me it is convincing proof the expediency of this mode of treatment in preference to the old one.—*London Lancet.*

Turning, in Arm and Shoulder Presentations. By S., B. Phillips, M.D.—Most works on obstetrics, and almost every professor, who lectures on this subject, give directions to seize both feet at the same time, in turning in utero, and bring them down together; or, if unable to grasp more than one, to secure that, after bringing it down, by the fillet; and then to introduce the hand again into the uterus, search for the other, and bring it through the external parts also, before attempting to proceed with the delivery.

This mode of procedure is so universally recommended and adopted, that almost every Obstetrician feels compelled to follow these general directions, lest he should become reprehensibly responsible, by departing from an established practice; but from my experience in turning, in arm and shoulder presentations, I am fully persuaded that it is far from being the *best* practice in all cases; but on the contrary, that it is pernicious and unnecessary in *most* instances, to re-enter the uterus after having obtained one extremity, for the purpose of grasping the other.

The operation is sufficiently eevere and dangerous, when performed with as little irritation as possible, without introducing the hand the second time; and the ease with which the delivery can be accomplished, by one extremity only, in all ordinary cases, conclusively proves that there is no necessity to re-enter the womb, and search for the other, thereby increasing the danger of rupturing the uterus, and producing inflammation of that organ.

Delivery by one extremity, has its advantages, which are not afforded by grasping both extremities at the same time; one of which, is the greater dilatation of the os uteri and external parts, in consequence of one extremity being folded upon the abdomen, consequently affording greater facility for the passage of the head, the only difficulty usually attending footling cases, and by far the most frequent cause of the death of the child, the funis umbilicalis being too long compressed.

I was *first* led to depart from the practice recommended by the high authorities in Midwifery, by the occurrence of the following case, which I will relate, as illustrative of the practice here recommended.

I was called about six o'clock, P.M., to Mrs. ——, in labor with her second child; she had arrived at full time. She informed me, that about one o'clock that morning, she was awakened by a "discharge of the waters," not being con-

scious of any pain; that for two or three hours prior to my arrival, she had experienced slight pains at distant intervals. Her pulse was 104, with high febrile excitement. On examination, I found the elbow at the os uteri, which was rigid and unyielding, dilated sufficiently to admit two fingers only, with difficulty.

I ascertained the position of the fœtus, through the abdominal parietes, with a good degree of certainty before entering the womb, though not always practicable; the head was felt in the left iliac region, the breech rather more elevated on the right side; and the feet, one or both, were more distinctly felt on the right of the median line, in the mesogastric region; by the last *distinctive* mark, I was enabled to distinguish the breech from the head, and that the *left* arm was presenting.

I exhibited one-eighth of a grain of antimonii et potassæ tartras, in solution, every fifteen minutes, which produced full emesis after the fifth dose, when I found the os uteri beginning to yield. In a few hours, it was sufficiently dilated to admit the hand freely, and without any improper force; whereupon, I entered the left hand, and seized the right foot, unable to obtain the other, at least, without much irritation. I brought it through the os externum, secured it by the fillet, and attempted to search for the other; but every trial to reintroduce the hand, (the liquor amnii having been discharged nearly twenty-four hours,) caused such pressing-down efforts on the part of the patient, without the occurrence of uterine contractions, that I twice relinquished the attempt, and concluded to deliver, if possible, by one extremity only. This I found more easy than I had anticipated. By making slight traction on the right extremity, the breech passed without the least difficulty, and the left extremity was at once liberated. The only delay in the case, was caused by the cervix uteri grasping the neck of the child, after the delivery of the arms;—therefore, I am constrained to believe, that had I delivered by both extremities, instead of one, I should have been compelled to use the forceps to deliver the head; the use of which, *ought always to be avoided if possible*, as well as the use of all other instruments, when delivery can be as well effected without them. She recovered without one untoward symptom, and as rapidly as in ordinary cases; but had I re-entered my hand, and repeated the cause which often produces rupture or inflammation, it is probable, that the effect would have been deleterious.

No rule can be laid down strictly applicable to all cases. It is not contended that delivery by one extremity is always preferable, but that it is generally the most judicious proceeding. On the contrary, in the case of a child escaping through a rent of the uterus into the abdominal cavity, I should consider the delivery by both extremities, the better mode, to avoid increasing the rupture already existing. In delivery by one extremity, it is important to seize that extremity which is opposite the presenting arm, or shoulder, else there may be some difficulty, in producing complete evolutions of the fœtus; and this may be more readily and completely produced by one extremity, than both, when that extremity is brought down, which is opposite to the presenting part; for by grasping an opposite extremity, a partial rotation of the body takes place, causing the presenting part to recede from the os uteri, as that extremity descends in the act of turning, thereby causing a more complete evolution of the fœtus, than if the presenting arm or shoulder remained at the os uteri.

Since the record of this case, I have seen a paper on turning, which recommends that evolution should be performed in cases of arm and shoulder presentations, by one extremity, and gives the preference to seizing the knee instead of the foot or ankle. This practice commends itself, inasmuch, as there would manifestly be less danger of rupturing the uterus, or of causing inflammation, which are frequently the consequences of the operation.

Whatever tends to render this operation less severe to the patient, and less dangerous in its consequences, is worthy of the candid, serious, and impartial consideration of the accoucheur, as it is an operation, imperiously demanded in many cases, for which no other means can be substituted, whereby it is possible to save the lives of both the mother and child.—*N. Y. Med. and Surg. Reporter.*

Turpeth Mineral.—Croup. Dr. Hubbard, of Maine, recommends this substance as a prompt, safe, and valuable emetic in certain diseases. We find his remarks in the Summary of the Transactions of the College of Physicians of Philadelphia:

My attention was first directed to the use of this substance from feeling the want of some article, reliable, as an emetic

of certain, prompt, efficient, and safe action, with the least tendency to run off by the bowels. For, whatever may be thought of the value of emetico-cathartics, in many other cases, it must be admitted by all, that simple emesis is, in many pathological conditions, alone desirable; and that its complication with catharsis will, in such conditions, not only defeat the beneficial effects of the emesis, but will prove positively injurious, and often extremely hazardous. It is under precisely such conditions of the system, that the emetics, in common use, such as tart. antimon., ipecac., sulph. zinc, &c., will most frequently fail of producing efficient emesis, and are most liable to run off by the bowels. There are certain diseases—for instance, croup, scarlatina maligna—during all the stages of which, there is great insensibility of the stomach to the impression of emetics, and, when produced by inordinate doses, emesis is likely to be very imperfect, and to be followed by catharsis. The same insensibility also exists in all diseases, under circumstances of great prostration of the system, whether that prostration be owing to the violence of the disease or to its duration.

Every practitioner of experience must have felt the importance of availing himself, under some of the above named pathological conditions, of the revellent and equalizing effect of simple emesis; and he must also have experienced the difficulty and uncertainty of obtaining it by any of the emetic substances in common use. Take, for instance, a case of spasmodic and intermittent croup. The patient is suddenly seized, for the most part in the night, with croupy cough and spasmodic breathing, which symptoms continue, attended with great anxiety and distress, for several hours, and then pass off to return on the succeeding night with redoubled violence. In many instances, the intermissions of all morbid phenomena have been so imperfect, as to lull the friends of the little sufferer into a fatal security, until, by the accumulated power of repeated paroxysms, the patient is overwhelmed with disease, almost beyond the hope of recovery; when for the first time, medical aid is called for. A single case will better illustrate the difficulties the physician has to encounter, than any general description.

I was called, in the night of Feb. 5, 1845, to see Miss C., aged about 12 years. In the three preceding nights, at about the same hour, she had been seized with paroxysms, similar to the one in which I found her—each one continuing several hours, each of progressively increased severity, and each leaving her able to be about, during the day, with

respiration so easy as to excite no alarm, and only a slight croupy cough. I found her with breathing extremely quick laborious, and stridulous, the chest heaving with convulsive throes, the countenance livid, the eyes wild and distracted, extreme jactitation, the pulse thread-like, vaccilating, and too rapid to be counted, the extremities, up to the body, of an icy coldness, in short, the patient appeared like one in the last agonies. Strong rubefacients were immediately applied to the whole surface, sinapisms to the spine and extremities, and heated blankets to the lower limbs. As soon as she could swallow—for the deglutition was extremely difficult—five grains of the turpeth mineral were given at once, and followed with the free use of mustard whey; this not vomiting her, after fifteen minutes I gave her five grains more, immediately upon swallowing which, vomiting commenced, and continued smartly for more than an hour. During this operation, and for some hours after, a free use was made of a decoction of seneka, as a stimulant diaphoretic. Her respiration began to improve immediately on vomiting, and, at the end of about four hours, it was comparatively good; the skin open, natural warmth restored, and the circulation equalized. The patient was then put upon the use of the following powder:

℞. Pulv. ipecac. comp., ℈j.
Hydrarg. chlorid. mit., ℈j.
Camphor. pulv., grs. xij.
M. ft. Chart. No. vj.

One to be taken every four hours; a free use to be made of the decoction of seneka in the intervals, and the bowels to be moved after 24 hours.

The emetic did not produce purgation. No paroxysm of difficult breathing returned. In forty-eight hours, my attendance ceased. I know of no other emetic substance that would have effectually met such a case. Ipecac., sulphate of zinc, &c., would have proved too feeble at best. Tartarized antimony, would, I conceive, have been too hazardous, from its nauseating and sedative effect, setting aside the uncertainty of its producing emesis in any reasonable dose, and the almost certainty of its producing exhausting catharsis. I repeat, then, that in this form and condition of croup, my experience furnishes me with no substitute for the turpeth mineral, as an emetic.

In the more inflammatory and less paroxysmal forms of this disease, with decided arterial excitement, and hot skin,

from the commencement, tartarized antimony as a nauseant and emetic, may be, and undoubtedly is, with certain limitations, preferable. Still, I must say, that in all stages and conditions of this disease, where the equalizing and revellent effect of emesis is alone desired, I have never regretted having used the turpeth mineral, in preference to all other emetics. These remarks might easily be extended to the use of this remedy in some other forms of disease, and especially in some of the anginose affections. The hints above given will, however, enable the experienced physician to determine its applicability to such conditions, and I am warned to bring to a close these remarks, which you may find already too prolix.

It remains, then, only to say a few words upon the peculiarity of this substance as an emetic, and upon some of the objections urged against it. In the first place, the promptness and certainty of its operation belong to no other substance within my knowledge. It has seldom, if ever, failed to vomit efficiently, when administered in a proper dose, in any of the various conditions of the stomach, and of the system, in which I have given it. It usually acts in ten or fifteen minutes, and the dose should be repeated at those intervals, if the first fail, which rarely happens. In efficiency and revellent power, it is not, perhaps, quite equal to the tartarized antimony; it is, however, vastly superior, in these respects, to ipecac. or any other substance known to me. In safety, it is generally superior to antimony. Its emetic operation usually continues from an hour to an hour and a half, accompanied and followed by none of the distressing nausea, prostration, and depletion of antimony; but, on the contrary, leaving the patient with the invigorated feeling arising from equalized warmth and circulation. In its emetic operation, it has saldom, never in my recollection, been accompanied or followed by catharsis. I have never known it to be violent, nor otherwise than entirely safe in its operation, although I have given it in much larger doses than are usually directed; nor have I ever seen salivation follow its use as an emetic. So safe do I consider it, that in urgent cases I have not hesitated to put my patient under its full emetic operation, two or three times within 24 hours; nor have I seen ill consequences result from such practice. I am inclined to think that the dose should be somewhat larger than is usually recommended. From two to three grains may be given to a child two years old, and repeated in ten or fifteen minutes, until emesis is produced. If the first dose

fails, the second usually acts as soon as it touches the stomach.

Dr. Morris had no doubt that every physician, of much practice, must have experienced the need of a safe and efficient emetic, under the circumstances stated in the communication of Dr. Hubbard, as a substitute for the more active and depressing articles, in general use.

In a case of croup, some years ago, in which Dr. Meigs was in consultation, where tartar emetic had been carried as far as was deemed prudent, Dr. Meigs proposed the use of powdered alum, which answered an admirable purpose. Dr. Morris has since, repeatedly, used this article under similar circumstances, and has found it very rapid and efficient. It is an old remedy, but the suggestion for its use, under the circumstances referred to, came to him through Dr. Meigs, and he would confidently recommend it to the fellows.

Dr. Bell mistrusted the power of emetics, on the ground of their emetic effects alone, in the cases referred to in the communication of Dr. Hubbard. He considers croup to be an inflammatory disease, and preferred to place his reliance on depletion, and the antiphlogistic powers of tartar emetic. He considers the enfeebling effects of these remedies less to be dreaded, than the inflammation and morbid accumulations, which are too apt to follow a less energetic practice. The fact of the paroxysmal character of croup, is apt to deceive physicians into the idea, that no inflammation exists, whereas Dr. B. believes that inflammations are very apt to assume a paroxysmal form, especially in croup. Dissections of those dying of this disease, manifest the pre-existance of inflammation of the larynx and trachea; and the same inference may be drawn from the repetition of the symptoms, after an apparent subsidence. One attack may occur to-night, and be relieved by morning, by mild means, whereas, on the following night, a still more violent paroxysm may unexpectedly occur, which shall destroy the patient, showing the probable continued existence of the disease, in a latent state. Dr. B. thought that the effects of Coxe's Hive Syrup, when used as a domestic remedy, should not be confounded with those of tartar emetic, cautiously prescribed, and its effects carefully watched by the physician. It must be remembered that the former is a compound article, containg, amongst other things, squills, which is itself a very depressing article—besides, the injudicious use of this compound by parents and

nurses, is no argument against its employment under proper restrictions. To return to the effects of tartarized antimony, in the disease under consideration. Dr. B. was unable to find any substitute for it—any article having less power, would, in his opinion, be inadequate to the effect desired. Dr. B. did not know that he had ever treated a case of croup (and he has seen many) without it, and he had never witnessed any alarming effects from it, except in one instance.

That was in a little girl, five or six years of age, who had an attack of croup in the night, which was relieved by morning, under the use of tart. emetic., administered under Dr. B.'s immediate notice. A repetition of the medicine was directed, in the event of a return of the croupal cough, and the mother, misunderstanding the directions, gave it repeatedly, and at the short intervals, as had been done during the height of the paroxysm. The prostration which ensued was so alarming as to induce the attendants to send for the Doctor; but in a short time, and though the patient was in a critical condition, she was effectually aroused by cordials and stimulants.

Dr. Bell agreed with Dr. Morris, as to the exceeding rarity of spasmodic croup, and when this form does occur, he knows of no remedy more likely to relieve it, than the tartar emetic.

Dr. Bell believes that the confidence reposed by American physicians in the use of the lancet, tartar emetic, and calomel in croup, was the ground of their superior success in the treatment of this disease; whereas, our trans-atlantic brethren, who are fearful of the use of these heroic remedies, do not enjoy, and probably from this very reason, the same success.

Dr. Bell, therefore, prefers to meet the disease by a frank, decided treatment in the outset, and, instead of simply relying on vomiting and anti-spasmodics, he prefers tartar emetic and the lancet, with a view to their depressing effect.

Phenomena of Respiration.—M. Vierordt has been making a number of experiments on respiration, and especially on the quantity of carbonic acid exhaled according to the frequency of the respiratory movements. He found that the volume of respired air contained less carbonic acid in proportion as the respirations were more frequent. But the quanti-

ty of carbonic acid expired per minute was the same whether the respirations were quick or slow. This law was verified whatever was the quantity of carbonic acid formed per minute,—a quantity, however, which in M. Vierordt at different times varied from 174 to 470 cubic centimeters per minute.—*Edin. Med. Jour.—Comp. Ren.—Med. Examiner.*

Report on the Progress of Surgery. By Henry Ancell, Esq., M.R.C.S.E.—No observer can doubt that Surgery is making rapid progress. While on the one hand new operations are successively discovered for the cure of pathological lesions hitherto deemed irremediable, as the operation for the cure of strabismus, and the subcutaneous section in tenotomy: on the other hand, operations by the knife are superseded by a more rational and scientific, a less objectionable and equally successful treatment of the disease: as in the probable substitution of pressure for incision in the cure of some cases of aneurism.

Again, surgical operations which proved unsuccessful and were abandoned in despair in a more infantile period of the art, are now likely to be resorted to successfully in treatment of incurable maladies, as exemplified in the abdominal section for the extirpation of diseased ovaries. In a more strictly scientific point of view also, surgery is steadily advancing with the progress of physiology and pathology. An improved acquaintance with the phenomena of inflammation especially derived from microscopical anatomy and microchemistry, is leading on to more rational views of treatment. Statistical records are daily furnishing more accurate data of the results of practice, and the innumerable facilities now afforded in all the more civilized communities for extended and multiplied observation, are increasing in an incalculable ratio our stock of knowledge. So much is this the case, that no individual in active practice can hope to embrace all that is in progress, and all that has been done, even within a limited period, in his own reading and investigation, a circumstance which we feel assured will render the periodical Reports of the Progress of Surgery, which are to form an essential part of this retrospect, acceptable and useful to the surgical practitioner, embracing, as they are intended to do, results—and more especially practical results—in reference to etiology, diagnosis, pathology, and treatment.

1. One of the most recent works that has issued from the press on any general division of the subject of surgery, and by a surgeon, is an interesting volume by Mr. Macilwain, on the Nature and Treatment of Tumors. Mr. Macilwain maintains it to be a pure assumption that cancer, fungus hematodes, and other malignant tumors, are incurable by the powers of nature—and an assumption, moreover, we may add, the tendancy of which is the more pernicious as it perverts and discourages the labors of those who are industriously inclined. He takes a threefold view of the cause of tumors:—In the first place they are referable to the food containing something unusual; secondly, to the assimilating organs acting on the ingesta in some unusual manner; and lastly, or to both these circumstances combined. His curative intentions are therefore directed to diet, and to a regulation of the various organs which represent the different stages of assimilation. No organ in the body, according to the views of this author, is more frequently in fault than the liver, and this often without any indicative symptoms. A knowledge of this fact is to be arrived at by a careful history of the patient, in order to ascertain what injurious influence the liver has been exposed to at any time, and whether ordinary influences have been so exalted as to become injurious. The influences referred to are especially—sedentary habits, and the free use of alcohol, and of greasy, fatty, and saccharine matter; substances which contain a superabundance of carbon. To regulate disordered liver he tries to diminish the quantity of carbon, except such as is contained in necessary food. A man may eat meat—Mr. Macilwain observes—without fat; butter is unnecessary; so is sugar; and in this way, without depriving the system of anything really necessary to health, the liver may be materially relieved, and this indeed is the great mode of assisting its function. The result of Mr. Macilwain's experience in the treatment of tumors is the smallest possible degree of confidence in local applications, particularly in those which are supposed to excite curative actions in the part, and might be called *positive* remedies. To the judicious management of those which act by excluding injurious agencies, or *negative* remedies, he attaches more importance.

Cancer, so long as the viscera are sound, is a curable disease; and the absorption of malignant tumors generally is under the influence of remedial treatment. Our author gives the case of a lady, aged 39, who consulted him for a tumor of the breast which had been pronounced hopeless. It was

a true specimen of carcinoma—very hard, adherent to the subjacent parts, the skin tucked in at the nipple with a dark spot there, slightly abraded. painful, with a sense of drawing; the arm swolllen and red in the vicinity of the tumor, and a few drops of blood issuing from the dark spot daily. Her general health was greatly deranged—probably not one function in her whole body performed healthily. The plan of treatment consisted in the use of a very plain diet, the rigid exclusion of sugar and grease of all kinds, friction to the skin, with special avoidance of any interference in the neighborhood of the tumor. After the cessation of her scanty catamenia, a few leeches were applied to the pubis, and the medicines generally used were aloes and ipecacuanha, with now and then a dose of calomel. The case improved; the tumor became moveable, the suffering from it very trivial, and except when she transgressed in her regimen, although now and then a little uncomfortable, she was most generally easy.

The patient relaxing in her obedience, an eminent physician was consulted, who allowed her to 'eat what she pleased.' The result was, that in a few days she was thrown into a state of the most terrible suffering, for which opium was prescribed without relief; but a return to the former plan was attended with almost immediate amelioration, although she never recovered her former ease. So long as she adhered strictly to the plan, she had almost absolute immunity from pain; but she frequently tampered with impunity. She ultimately died, as the author believes from her own imprudence, in great agony. Mr. Macilwaine gives other cases to illustrate the beneficial effects of regular and daily exercise, a plain diet, and the exclusion of saccharine, oleaginous, and alcoholic matters in malignant tumors. The plan of diet should be 'simple, and strictly defined;' and one of his correspondents, Mr. Kingdon, remarks:—I am now convinced that many diseases, which have hitherto been considered incurable, may be cured by that close attention to the minutiæ of function which *does not permit the most insignificant portion of the frame to be overlooked.*

As respects depositions generally which are not cancerous, Mr. Macilwain now seldom sees any in which he cannot succeed by strict treatment; sometimes in procuring their absorption, almost always in arresting their progress; and he believes that he has succeeded in promoting the absorption of ten or twelve malignant tumors at least.

The author's observations on the progressive results of the successful treatment of tumors are thus described:

"The first change observed is that if there have been much pain, there is a very material and marked diminution, or a total subsidence of it, without the influence of *opium or any other narcotic;* and this, too, when opium and other narcotics have been exhibited in vain. The tumor becomes loosened as to its subjacent connections; and I have more than once seen a tucked-in nipple resume the natural appearance. A change yet more important is, that the tumor which had before, perhaps, presented itself in one mass, with more or less irregularity, becomes broken into portions, so as to feel like separate depositions, intersected as it were by lines of more healthy structure. This is speedily followed by a diminution of the characteristic hardness; so that after a while the carcinomatous character becomes entirely lost. The change progressing, the tumor becomes gradually absorbed, until nothing remains but what, if now examined for the first time, might be taken for an enlarged gland; and this gradually disappearing, the part resumes its ordinary character. Now all this has never happened without a change in some one or more important function to which the treatment has been specially directed, though this has varied in different cases according to the function which, on careful analysis, appeared to be most seriously or primarily affected. If I were called on to name any dietetic measure most general, I should say the diminution of carbon, in the interdiction of grease, sugar, and alcohol. If I were asked what one organ has most frequently appeared to take the lead, I should say the liver."

We have thus given as fair a statement of Mr. Macilwain's views as our space will admit of, because we verily believe that much suffering accrues, if not loss of life, from men holding the most eminent position as surgeons and physicians, distrusting the unquestionable powers of nature, and relinquishing the systematic and scientific treatment of what they deem hopeless diseases. Heterologous formations frequently disappear, to the surprise of the surgeon, without any obvious cause, but not without a cause. These cases establish the justice of our claims for the powers of nature. We believe our readers will regard Mr. Macilwain's views respecting the principles and the details of his treatment not merely as interesting, but as important.

2. A work has also been recently published on the Treatment of Cancerous Tumors of the Breast without Operation, in Paris, by S. Tanchou, in which 302 cases of cancer are collected together, as having got well after the employment of various remedies. We find this author boldly maintaining that cancer is not absolutely incurable. He gives, it is true, but three cases of amelioration, and fails to prove his position; yet the cases cited have been admitted by some of his reviewers as demonstrative that it is possible not only to ameliorate cancerous affections, but also to arrest their progress and render them stationary.

3. A work published at Paris by Dr. Jules Guyot in 1842, and reviewed in the British and Foreign Medical Review of January last, will doubtless call the more particular attention of surgeons to the important subject of temperature in operations and the treatment of surgical diseases. M. Guyot infers, from the numerous experiments, that air, when devoid of any noxious impregnation, has, simply considered, no injurious action on living parts. It may, nevertheless, become injurious in two ways:

1. Mechanically, as by causing the lung to collapse in penetrating wounds of the chest,—by destroying the cellular attachments of the viscera in wounds of the abdomen,—and by distending or compressing organs as in emphysema.

2. As the medium of an injurious temperature, air introduced into the serous and synovial cavities occasions inflammation by its coldness: at the temperature of 36° cent. (96⅕) Fah., the articular, cranial, thoracic, and abdominal cavities, may be opened without danger of inflammation, in so far as the contact of the atmosphere is concerned.

By the term 'Incubation' as a curative process, M. Guyot implies a temperature of 36° cent. applied to the body by means of heated air. He distinguishes three species:

1. Local or circumscribed incubation adapted to amputations, wounds, &c.

2. Diffuse incubation, acting upon a considerable portion of the body, to re-establish a function, restore the equilibrium of the circulation, &c.

3. General incubation applicable to premature birth, defective development of infants, and various diseases. It may also be continued or intermittent in its application. Various kinds of apparatus are employed for the purpose.

This peculiar treatment has been tried and found successful in ulcers, some of which were of an inveterate kind; and

in one case of twenty-five years' standing, in a man aged 67, in a large, callous, and fistulous sore, in an immense lacerated wound of the arm. In a case of phlemonoid erysipelas, terminating in gagrene, two days after the commencement of the treatment, the suppuration was diminished to one-half, the wound was covered with granulations, and the fever had ceased. In œdema of the limbs, in phlegmonoid erysipelas, eczema, and a numerous variety of cases, it appears most essentially to influence the cure.

M. Guyot has put his method into practice in *white swelling*, and records cases which seem to indicate that is worthy of a more extensive trial. A case of chronic rheumatism was cured in twelve days, and a case of periostitis of the tibia in eight days. A malignant or ill-conditioned ulcer of the nose, which had resisted ordinary treatment, was much benefited by incubation; and in another case a cancerous ulcer of the worst character, also seated on the nose, this treatment modified the sore in a remarkable manner; the mammillated and tuberculated surface contracted its limits, caused the redness and pain to disappear, and predisposed the tissues to cicatrization. The arsenical paste was then applied, and the cure became complete. Thirty-two cases are detailed in which incubation was applied to the stump after various amputations and the results, as compared with the results of amputation under ordinary treatment in the Parisian Hospitals, were very greatly in favor of the remedy, although there is some reason to doubt whether they were fairly attributable to the artificial temperature.

While on the subject of temperature in the treatment of surgical diseases, we may state that in Mr. Grantham's work, quoted in our extracts, great stress is laid upon the principle of keeping up the normal temperature, or 'the vitality' of the superficial structures in inflammation of the ligamentous, tendinous, and cartilaginous parts of the body; and the book contains illustrations of the efficacy of the treatment founded on this principle. Thus, in the after treatment, on reduction of a bad dislocation of the ulna and radius, Mr. Grantham steams and foments the limb for an hour, and then applies a large hot bread and water poultice for several days. He observes of this case, which was cured in a few days, 'that no blood was lost, nor any cold applications used.' The treatment was simply keeping up the action of the exhalents and absorbents, so as to remove tumefaction and extravasation without lessening the vital properties pertaining to the

low organized textures, as it is the ligamentous and tendinous structures which are injured in all dislocations.

In the operations for removal of ovarian tnmors, the surgeon finds it of the first importance to regulate the temperature of the atmosphere. In fact, no one who has witnessed the extent and length of time of the exposure of the abdominal viscera in many of these operations can doubt that their safety has been, to a very considerable extent, secured by attention to this circumstance, and that inattention to it would very decidedly increase their mortality. We have placed this subject thus imperfectly before our readers, convinced that surgeons in this variable and inclement climate are, in the main of their practice, much too negligent on this important point, and in the hope that the future numbers of the 'Retrospect' will have to record more favorable results in several departments of surgical practice, when it receives a greater share of attention.

4. Dr. Egan has lately published an elaborate article 'On the Diagnosis and Treatment of Syphilitic Diseases,' the substance of which he recapitulates as follows:

1st. I have observed the simple superficial ulcer, unattended with indurated margin or base, give rise to a papular eruption, pains resembling rheumatism, increased vascularity of the throat, generally accompanied with enlarged tonsils. In this form I have never witnessed the occurence of rupia, nodes, or ulceration of the back of the pharynx: in this class, which were for the most part treated without mercury, constitutional symptoms occurred far more frequently, but were of a milder description than in those where the opposite plan of treatment was adopted. When topical applications fail mercury is resorted to for the purpose of accomplishing a cure.

2dly. That strong presumptive evidence has been afforded, that the matter of gonorrhœa, in its incipient stage, is capable of producing a mild form of secondary symptoms; but not having been able to substantiate this opinion by the process of inoculation, I cannot, as far as my experience goes, lay it down as an ascertained fact.

3dly. That the excavated ulcer, with indurated margins and base, commonly described as the Hunterian chancre, has, in my limited number of cases, been succeeded by a scaly eruption and excavated ulcers of the tonsils; and that in those cases alone mercury deserves the name of a specific.

4thly. That the phagedenic ulcer, where it has existed *ab initio*, does not owe its characters to any peculiarity of constitution, but to a specific virus, as is evinced by the dissimilarity and inveteracy of the secondary and tertiary symptoms; and that in such cases mercury is decidedly injurious. And, lastly, that all the secondary forms of syphilis, with the exception of iritis, are curable without the aid of mercury; the cure, however, is much more protracted, but relapses far less frequent.

5. There is nothing before us of very great importance in Thoracic Surgery. Forty cases of injuries of the chest were the whole number received into Guy's Hospital from January 1, 1843, to December 31, 1844. The series excludes injuries in this region of minor importance treated out of the hospital. Of the 40 cases four terminated fatally, that is to say, 10 per cent. The cases include, simple injuries of the chest; fractures of the ribs, sternum, and clavicle; comminuted fractures; penetrating wounds of the chest; injuries of the lungs; with different complications, as pneumonia, pleuritis, pleuro-pneumonia, emphysema, hemoptysis, collapses, and general obscure inflammatory and other symptoms. The usually admitted principles of treatment were resorted to, as—rest, bandaging, bleeding — general and local, and purgatives; and to meet special complications and symptoms —calomel and opium, incisions, punctures, brandy, and other stimulants, blisters. antimony, diaphoretics, &c. Except that a series of such cases must present novelties in their details, and if faithfully recorded, must be interesting and instructiive to the surgical practitioner, this report does not contain anything new in principle, either as respects diagnosis or treatment.

6. The following is an interesting case of injury of the chest, with hernia of the right lung. A child, 13 years old, fell from a considerable height, whilst he was playing, and struck himself against the end of a branch of a tree which had been recently cut. A wound about three inches in length on the anterior part of the right side of the chest was the consequence, extending transversely between the fifth and sixth and rib. Dr. Anglo, who was called in immediately, found a considerable quantity of blood from the interior of the chest, and at the same time an elastic tumor about the size of the fist, and of a rosaceous color, having a transverse wound, and evidently being part of the inferior lobe of the

lung. There was much oppression and anxiety, an extreme pallor, the pulse 'miserable,' the extremities cold, and every thing indicated imminent danger. The protruded portion of the lung was reduced, although with difficulty, and the edges of the wound were brought together with bandages. The patient was three days recovering from the violence of the concussion. Reaction then came on which was met by bleedings and antiphlogistics. The wound soon cicatrized, the pulse recovered its functions, and in six weeks the cure was complete. The French Journals contain several cases in which paracentesis thoracis has been performed with successful results.

7. In Abdominal Surgery, Ovariotomy occupies the first place. The revival of the abdominal section for the purpose of removing diseased ovaries, is an important circumstance in the history of modern surgery, and the progress of opinion respecting this important operation, both as to its propriety as a mode of cure, and the various modifications which may be suggested in the manner of performing it, deserves the immediate and most serious attention of every practical surgeon, for, although the general treatment of the disease itself most frequently devolves upon the accoucheur, the formidable nature of the operation will in all cases render it desirable that it should be undertaken by the practical surgeon. We propose to fix the attention of our readers upon the state of our knowledge at the epoch from which this 'Retrospect' dates, by referring to Mr. Phillip's paper on the subject.

This gentleman has collected the results of eighty-one operations:—

The tumor was extracted in - -	61 cases
Adhesions, &c, prevented its extraction in	15
No tumor was found in - - -	5=81

Of the whole number:—

The recoveries after abdominal section were	46
The deaths - - - - - -	32=81

But all the cases in which no tumor was discovered, and the operation was not completed, recovered.

Of the cases in which the tumor was extracted there were:—

Recoveries - - - - - - -	35
Deaths - - - - - - -	26=61

Of those in which adhesions and other circumstances preven

vented the removal of the tumor, nine recovered, and six died.

The large incision was resorted to in 55 cases with the following results:

Cured - - - - - - -	23
Recovered - - - - - -	6
Died - - - - - - -	26=55

The small incision in 27, of which there were—

Cured - - - - - - -	13
Recovered - - - - - -	7
Died - - - - - - -	7=27

Several years ago, that distinguished physiologist and practitioner, Dr. Blundell, drew up a paper which was read to the Medico-Chirurgical Society, the object of which was to demonstrate what the author then believed to be a fact, that the fears entertained by surgeons were greatly exaggerated respecting the dangers that attend wounds of the peritoneum. We have not seen the paper, but have had opportunities of conversing with its author upon the subject, and we understand that it embraced cases of the most extensive laceration of the parietes of the abdomen, with extrusion of the viscera, which had ultimately recovered. The Society declined publishing the paper, but the author has never had reason to alter his own deductions from a consideration of those cases. The recent results of the abdominal section tend very greatly to confirm his views. It is quite true that in many cases of ovarian disease, previous to the period at which an operation is likely to be performed, the whole peritoneum has assumed a pathological condition; but it is equally true that inflammation, and all its consequences, is liable to occur at any period during the progress of ovarian disease, and also, that it is inflammation which is chiefly dreaded by the surgeon, in making extensive incisions through the peritoneum, and in handling and exposing the abdominal viscera. It is not for us to encourage or discourage any particular *methodus medendi*, we are rather the chroniclers of events; and we shall in future collect all the cases which meet the public eye, wherein this operation is resorted to, with a view to place the results before our readers. It may, however, as we conceive, be justly remarked, that according to the evidence before us, the danger of inflammation in these cases, is not so great as we have been taught to believe, and the observation of Dr. Blundell upon this head is perfectly correct.

An additional case is recorded by Dr. Bowles, of Harrison

county, Ohio, wherein the incision was nine inches along the linea alba: the omentum was found to be adherent to the tumor, and the latter firmly bound down by adhesions to the bladder and uterus; but all the adhesions were easily separated by the handle of the scalpel. The patient vomited during the operation, producing protrusion of the intestines. To prevent distension of the bowels by flatus, a tube was kept in the rectum. The tumor was solid, and weighed five pounds. No doubt remained of ultimate recovery.

Cases by Mr. Clay, Mr. Lane (unpublished), and others, the above record in the Medico-Chirurgical Transactions, have come to our knowledge; they are for the most part successful, and will be placed before our readers in our next number.

8. The proposed revival of the treatment of fistula in ano by ligature, according to an improved method, has met with objections. It is asserted to be inapplicable and insufficient in many cases, and also more painful and hazardous than the operation with the knife. Mr. Salmon, after nearly twenty years' experience, denies that the operation by incision is attended by any peculiar hazard from hemorrhage or otherwise. In 248 cases, selected promiscuously, he states that no fatal hemorrhage occurred; in 20 instances only, was there any bleeding which required attention, and in these latter cases the simplest precaution sufficed to prevent any serious inconvenience. The operation by ligature has, again, been admitted to be applicable in cases of small and single sinuses, but its propriety doubted where large abscesses, with loss of substance, and complicated sinuses tending in different directions, occur. In these latter cases, Mr. Luke admits that ligature offers no better success than the knife, but, he states, 'certainly not less,' The probability of success must depend much upon the extent and direction of the communicating sinuses, and upon their complications with ligamentous and osseous structures. In more remediable cases, Mr. Luke remarks, that although, when mismanaged, the ligature may produce protracted pain, yet, when well managed, it neither produces as much pain as the knife, nor as much hazard; particularly where the rectal aperture is barely within reach of the finger. The insertion of the ligature according to the plan recommended, causes scarcely more pain than a common examination; it is at no time necessary to draw it so tight as to cause pain; "during the first few days, or until the slight inflammation of the fistula which succeeds its intro-

duction has attained its maximum amount," it should be left loose; it is then made nearly tense, but not to give pain, and the tension is to be kept at this point by renewed turns of the screw every two or three days. The whole proceeding is to be slowly conducted, and in this consists the essence of the improvement as compared with the mode of applying the ligature in former days. When pain occurs, it usually arises on the accession of inflammation, causing the included parts to swell; the ligature is then to be loosened, which is readily effected by the kind of apparatus employed. We may add, that the operation by the knife is one greatly dreaded in most cases by patients, and frequently deferred in consequence of that dread; and there can be no doubt, that if the surgeon can conscientiously resort, as a general principle, to the treatment by ligature, the subject of this formidable disease will more readily cofide in the scientific surgeon, and less frequently fall into the hands of the charlatan.

9. One of the most important surgical subjects which has lately been brought before the consideration of the profession is the Cure of Aneurism by Pressure. Several cases of this formidable disease, cured without operation, are quoted in our extracts, and it is most important that the practical surgeon should be made fully aware of the recent results of experience in this method of treatment. Compression effected in various ways has repeatedly been resorted to, for the purpose of arresting or curing aneurism, but we believe that we may state, at once and unequivocally, that the application of pressure upon strictly scientific principles has never had a fair trial. The cases before us justify the opinion that in many cases it will prove an adequate remedy, and will supersede the use of the ligature.

It may be useful to take a cursory view of the objects for which compression has been resorted to in the treatment of aneurism.

Dr. W. Hunter held that when the integuments begin to give way in aneurisms of the aorta, bandage judiciously applied might preserve life for some considerable time, but looking to the effects of pressure on the arterial tunics, during the gradual dilatation of the aneurismal sac, where it meets with the resistance of the osseous structure, as of the sternum or vertebræ, he came to the conclusion, that in the main, compression or tight bandaging would only aggravate the evil. Dr. D. Munro taught the same doctrine. But in cases of false aneurisms, when small, particularly those oc-

curring in the arm from bleeding, Dr. Munro advocates, together with moderate depletion, compression on the part, by means of compresses and bandages, to prevent the blood from flowing in the cyst; the compression to be continued not only till the tumor disappears, but likewise for some time after, lest a relapse should occur; quoting cases which have been cured, but concluding with the remark, that 'where such aneurisms are large, and of long standing, this method can have no effect.' Guattani and the surgeons of Rome about this period (1750–60), attached more importance to compression as a remedy, and resorted to it somewhat more systematically in crural and popliteal aneurisms. The latter author recommeds gradually compressing the aneurismal tumor, by means of bandages applied more and more tightly from day to day, and gives successful cases. It will be observed that Guattani's method was 'direct and energetic' pressure. Subsequently to the Hunterian operation being adopted, the plan of compressing the artery at some distarce from the tumor was made trial of by Dubois, Astley Cooper, and others, the object being, by severe and continued pressure, to render the artery impervious. The objections to these modes of applying pressure are stated to be, and no doubt are, positive. It is either insufficient, or it is impossible to protect the neighboring parts from its influence, and accordingly the flow of blood in the collateral vessels is arrested; it requires to be continued for a great length of time. and is attended with great pain. Hence constitutional disturbance followed by inflammation, ulceration, or sloughing of the compressed parts; in numerous cases the patient has been unable to sustain it, and from other causes it has proved unsuccessful.

We will furnish our readers with a short account of the more scientific application of pressure for the cure of aneurism, lately adopted by Hutton, Cusack, Bellingham, Allen, Greatrex, and Liston, from Professor Miller's Principles of Surgery. The pressure is made at the Hunterian site, but is neither constant nor severe. By any suitable apparatus, a moderate degree of pressure is applied to the vessel, at a point where the coats may be expected to to be sound, and consequently not prone to ulcerate from various causes.

This is maintained so long as it can be conveniently borne by the patient, but no longer. When uneasy sensations become intense, with swelling and numbness of the limb, and throbbing in the part, the pressure is either slackened or removed. After a time, the parts having recovered, it is reapplied. Again it is removed, and thus the disasters formerly

attendant upon the treatment by pressure are avoided. At the same time that the circulation in the aneurism is moderated, the tumor begins to diminish, its pulsation is less, and it feels harder and less compressible; ultimately pulsation wholly disappears, and induration becomes complete, absorption advances, and the cure is obtained with or without a previous state of the vessel. Throughout the treatment absolute repose and decumbency are maintained, with an antiphlogistic regimen. Also, the limb below the compressed point must be uniformly and equally supported by bandaging, lest passive congestion and œdema supervene; and this pressure may, from time to time, be somewhat increased on that part of the limb which includes the aneurismal tumor. The process is one of weeks, not days—gradual, not sudden—interrupted, not continuously progressive. The pressure requires to be neither great nor constant, for we do not desire obliteration even temporary. It is sufficient to moderate, not essential to obstruct the flow of blood. The treatment is conducted rather as if itself were not the agent of cure, but only the means whereby the spontaneous cure may be originated and favored.

The objections still advanced by Profossor Miller to this improved method of applying pressure are:—The protracted period and ultimate uncertainty of the cure. If improperly conducted, it is in every point of view inferior to the ligature. It is less capable of general application, since many systems cannot tolerate pressure; our experience of its use is in its infancy.

The last objection of Professor Miller is exactly that which will render it incumbent on us, in the future numbers of the 'Retrospect' to place before our readers an abstract of all the cases, whether successful or unsuccessful, that may for some time to come meet the public eye. This is the only way by which profit can be made to accrue to the great body of surgeons by the experience of individuals. At present it will suffice to say that in 1831 Assalini published a case of popliteal aneurism cured by pressure. In November last, Dr. Hutton, of Dublin, recorded seven cases treated by pressure, one only of which was unsuccessful. Giraldés in his memoir cites fifteen cases, including those just referred to, of aneurism treated successfully by compression of femoral artery, and he remarks that the mean duration of the treatment was 24 days, the minimum 5 days, and the maximum 90 days; and this author judiciously suggests that one circumstance which ought to plead strongly in favor of com-

pression, and recommend it to the attention of surgeons, is the contingencies which await the operation by ligature. The ligature is not an infallible remedy; too frequently the disease returns after the operation, of which circumstance instances are cited upon the authority of Cooper, Brodie, Roux, and Lenoir; and serious accidents, as consecutive hemorrhage, wounds, and inflammation of the veins, gangrene, and death, have been the consequence. Such being the fact as relates to the treatment now resorted to by surgeons, the new plan ought at all events to be tried for the present, in every case, before resorting to the operation.

The advantages of compression over ligatures are, that it is exempt from all danger; so far as the evidence enables us to judge, more universally successful; it is applicable to certain cases of aneurism to which the ligature is not, and to some in which the operation by ligature would be likely to be followed by unfavorable results, as in the case of very large aneurisms which compress the collateral circulation. It is applicable in cases wherein the ligature is contraindicated from disease of the arterial system, and in cases of the 'aneurismal diathesis;' also in cases of spontaneous aneurism in broken-down constitutions, in which the surgeon would perform an operation only with the greatest reluctance; and lastly, its employment, if ever it should happen to be unsuccessful, does not preclude the subsequent operation by ligature.

We conclude this article with a quotation from Dr. Bellingham's explanation of the mode of applying the pressure.

"Instead of employing a single instrument, we employ two or three, if necessary; those are placed upon the artery leading to the aneurismal sac, and when the pressure of one becomes painful it is relaxed, the other having been previously tightened; and by thus altering the pressure, we can keep up continued compression for any length of time." * * *

The instrument "consists of an arc of steel covered with leather, at one extremity of which is an oblong, padded splint; the other extremity terminates in a nut, containing a quick screw, to which a pad, similar to that of a tourniquet, is attached. * * * The principle is extremely simple; so much so, that the patient can regulate its application himself, and it can be made of every size, so as to compress any vessel within the reach of compression."

10. The subject of tracheotomy and the removal of foreign bodies from the larynx excited great interest at the pe-

riod when Mr. Brunel's case was before the public. In that remarkable case the patient suggested the idea of inverting the body so as to give the same facility to the passage of the substance out of the tube which it had to get in, but the experiment demonstrated that the human system is not a mere machine—a vital spasmodic action closed the glottis and rendered the experiment unsuccessful, until the art of the surgeon was resorted to for the performance of tracheotomy. A case, however, has been recorded in the Northern Journal of Medicine from which it appears that the idea of the mechanician will sometimes succeed, and that the knife of the surgeon may be superseded. A shilling slipped through the glottis of an individual, giving rise to comparatively little inconvenience. It seemed to the patient to be fixed at the cricoid cartilage, and that it would return if he were placed on his head:—

"The man was placed with his shoulders against the raised end of a pretty high sofa, and then being seized by three of the most powerful of those present by the loins and thighs, he was rapidly inverted, so as to bring the head into the dependent position, and after a shake or two, Dr. Simpson at the same time moving the larynx rapidly from side to side, the shilling passed into the mouth and fell upon the floor." The relief was instantaneous and complete.

In our own immediate neighborhood a piece of cotton wool passed into the trachea of a lady from a carious tooth; a medical man was called in, and precipitately ran out for another surgeon to perform tracheotomy. In the interval, the husband believing that his wife was at the point of death, inverted her body, the foreign substance was expelled, and before the return of the doctors she was perfectly restored. It should not be forgotten, however, that the foreign substance in falling from the trachea might fix itself in the glottis and cause almost instant death, so that the inversion of the body cannot be considered a safe measure unless the surgeon is at hand with his scalpel.

11. The various foreign and domestic journals during the last six months contain the usual amount of information in the shape of lectures, essays, discussions, cases, &c.; but we believe we have extracted the most important novelties. There are some interesting instances of those cases which involve what are usually styled the minor operations of surgery, which are by no means undeserving attention, The following is an instance in point:

A lady from the country had a carious tooth filed to admit a pivot to an artificial tooth. This trifling operation was attended with little pain, was followed by an abscess in the jaw, for which the extraction of the root was recommended; but as it was a superior canine tooth, with a deep root, and as the stump presented no hold, the most skilful dentists would not undertake the extraction. According to the advice of M. Recamier, M. Maisonneuve made an incision in the mucous membrane; and after exposing the maxillary bone, he divided the bone along the alveola. This operation is infinitely less painful than those resorted to by dentists with their various instruments. The root being thus exposed, M. Maisonneuve laid hold of it with a hook, and it was removed with great ease.

12. Operations, novel in character, or remarkable for their boldness, are sometimes resorted to *once* even by judicious surgeons, and are justifiable, although judging from results we may arrive at the conclusion they ought never to be repeated. These and the more rash experiments of the ignorant or reckless, like rare and extraordinary cases, frequently throw light upon the phenomena of nature, or serve as beacons for the future. Instances of one or more of these different classes of surgical cases will be found in that part of our volume set apart for 'extracts,' and we may add to those contained in our present volume two cases of "puncture of the intestines to relieve the agony of distension in supposed internal strangulation," lately recorded by Sir George Lefevre.

The lady of an officer of high rank had been suffering for some time with disordered digestion, when she was suddenly seized with violent vomiting and purging, and fecal matter was discharged by the mouth. To this succeeded constipation and tympanitis; the latter being so distressing that it was resolved to puncture the bowels. Large quantities of gas escaped: the patient felt immediately relieved from her extreme sufferings. She died the same day or the following."

"A lady, the mother of six children, was in the family way of the seventh, and in about the fourth or fifth month of utero-gestation. She complained of sudden pains in the bowels, which she took to be colicky, and used some domestic medicine. The pains increasing, and the bowels continuing locked, blood was taken from the arm, and leeches applied very freely to the part. No relief was afforded. The abdomen became very tense, and the pains returned at repateed

intervals. She expressed herself thus,—that she had borne six children, and that the united pains of all her labors were not so excrutiating as any one of the pains under which she suffered. All means had failed in procuring her relief. Six or seven medical men were in constant attendance upon her. Injections, warm baths, cold affusions, bleeding, opium in large does, nothing relieved her.

"It was, therefore, upon the idea only of shortening her sufferings, that it was proposed to puncture the intestines. A trocar was thrust into the colon, some gas escaped, and she exclaimed, 'I can breathe now.' Fæces soon filled up the canula; the spasms returned, but in rather diminished force. She sank in about fourteen hours after the operation. suffering to the last.—*Ranking's Abstract.*

Treatment of Scalds.—Dr. Grosskopf speaks strongly in favor of the Ung. Plumbi Acetat. as a local application in cases of scalds, stating that if applied at once, it invariably prevents the formation of vesicles, speedily allays pain, and diminishes redness and swelling. In cases where vesicles have already formed and burst, its application quickly promotes the healing of the exposed surfaces. No evil effects on the system have followed its employment.—*New York Medical Intelligencer.*

Arsenic in Intermittent Fever.—M. Boudin, physician to the Military Hospital at Versailles, reports to the French Academy of Medicine the result of his practice in intermittent affections. He has exhibited arsenical preparations to 2,946 patients in the course of five years, with the most beneficial results. The preparation he employs is a solution of one grain of arsenicous acid in a pound of distilled water: three ounces constituting the common dose.—*Med. News.*

THE WESTERN JOURNAL.

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THE WESTERN LANCET.

We are grieved to see that a remark made by us, in our obituary notice of the late Professor Richardson, has provoked the displeasure of our neighbor of the Western Lancet. The editor, in his December number, after quoting from our article the words which follow: "but Dr. Richardson, while he was sensible of the superior advantages which this school (the Louisville Medical Institute) would enjoy, made up his mind to remain in the institution which he had been instrumental in building up;" goes on to express "deep regret," that they should have found a place "in *such* a journal, on *such* an occasion." They "explain," in his opinion, no part of the "history" of the deceased, have "no relationship to his character" as a public man, and must, therefore, he insists, have been "introduced for the purpose of injuring a rival medical school." He adds: "It will certainly be regarded as a unique specimen of ill-feeling, which would introduce an *electioneering* paragraph, into an obituary notice of a lamented member of the profession, and a former colleague."

Our neighbor's sensibilities are, evidently, very much shocked; he looks upon our harmless paragraph as something near akin to sacrilege. But we assure him, that we were not prompted by any

"ill-feeling" in writing it, and that nothing was farther from our expectations, than that we should offend any one by adverting to a fact, as well known as any other, in the history of Professor Richardson. As to its relevancy or importance, we are sorry that the editor of the Lancet does not think with us; but in regard to that we had to judge for ourselves; and if it occurred to us as a very momentous incident in the life of the deceased, we venture to believe that it did not appear less so to himself and his friends. Professor Richardson was the first individual, connected with the Lexington school, to broach to an influential Senator in the Kentucky Legislature the project of removing that school to Louisville; and that he continued to be one of the warmest advocates of that measure for a long time afterwards, is as certain as anything can be rendered by human testimony. It rests, in truth, upon nothing less than his own declaration to the Board of Trustees of Transylvania University, and if anything further were needed, we might add, upon the published evidence of four of his colleagues. But it is unnecessary to insist upon the truth of our statement, since the editor of the Lancet does not call it in question; he contents himself with remarking—

"In relation to the assertion contained in the obnoxious paragraph, we can only say, that we know not what views Prof. Richardson may have expressed to the writer; but this we do know, that during our short association with him, he always *decidedly* and *emphatically* expressed the contrary opinion."

It appears, then, that Prof. R. not only made up his mind to remain in Lexington, but changed his views in respect to the great superiority of Louisville over that city as a seat for a medical school; and to show, we suppose, that such changes of opinion are not rare among distinguished teachers, the Lexington editor copies largely from the discourse of our colleague and friend, Prof. Caldwell, on the "*impolicy of multiplying schools of medicine.*" He does our venerable associate the honor to say, that he "is justly regarded as one of the ablest men of our country," and that he had enjoyed "opportunities of becoming perfectly familiar with the facilities for instruction in the large cities of the United States and Europe." The "opinions" of Prof. C., to which the editor of the Lancet "concedes great weight," were, that hospitals were of no benefit to a large class; that living was "fifty per cent. higher in Louisville and

Cincinnati than in Lexington;" and that these cities afforded to pupils no superior facilities for prosecuting practical anatomy. These were the chief; to which we might reply, after the manner of our neighbor, that our learned colleague *does not entertain them now;* but since our brother editor is disposed to allow them "*great weight,*" we will state a few reasons why we are compelled to dissent from them.

Concerning hospital instruction as formerly administered, the sentiments of Prof. Caldwell were no doubt correct. A large class crowded around the beds of the sick are in no situation to see or hear to advantage; but our neighbor understands that things are ordered differently now; and that the clinical remarks and examinations made in amphi-theatres connected with hospitals, with patients full in view of all the class, surpass in interest and instructiveness any other lectures delivered on the practice of physic.

In respect to the cost of living, our colleague was altogether mistaken; experience has proved that it is not greater in Louisville than in Lexington.

The only other question relates to the comparative means of large and small cities for sustaining the anatomical department of a medical school, and we have seen that the author of the discourse referred to did not concede to the former any superiority on that point. This was his opinion, weighty or otherwise, and he expressed it with great earnestness. In his eloquent discourse, in passages quoted and apparently adopted by the Lancet, he depicts, in frightful colors, the difficulty of procuring subjects in large cities—a difficulty, which, as he forcibly expressed it, "has led to the atrocious practice of assassinating individuals, and selling their bodies to surgeons and pupils!" This appeared unanswerable, at the time; the fact seemed to be made out, that crowded cities were *not* the places to study anatomy; but it was still an opinion merely. We have had experience since, and, as a part of it, we declare to the editor of the Lancet, that "*Burking*" is still unknown in Louisville, notwithstanding that large classes have been engaged in the dissection of human subjects, every winter, for seven years past. Dr. Bush, the then Demonstrator of Anatomy, stated before the Trustees of Transylvania University, in March, 1837, that there had been, in the anatomical rooms under his supervision, *eleven* subjects during the preceding winter; and that, out of a class of two hundred and forty-two,

one student had engaged in dissection. The session in the Medical Institute is now just half over, and, according to information derived from the Demonstrator of Anatomy, the dissecting classes, amounting to upwards of thirty, and embracing one hundred and eighty-four pupils, have already been supplied with subjects. With the beginning of the year his first class was invited to recommence their labors, and, if his success should not be less than it has been in former years, he expects to see every class in his rooms a second time before the first of March. This is experience *versus* opinion.

It appears from the article in the Lancet, that both Dr. Richardson and Dr. Caldwell changed their ground respecting the superior fitness of Louisville for supporting a medical school. Dr. Caldwell, at one time, seems to have doubted it; but finally his doubts gave way, and he became an advocate for the removal. With Dr. Richardson the process was the reverse of this; he was the first to propose measures for transferring the medical department of Transylvania to Louisville; but, according to the Lancet, towards the close of his life he was "decidedly and emphatically" of opinion that Lexington was the better site. Here, again, we have been taught by experience. Dr. Richardson lived to see the Louisville Medical Institute numbering two hundred and eighty-six students, while he was lecturing in Lexington to a class of one hundred and fifty-six. Dr. Caldwell still lives; he does not know what the present size of the Lexington class is, but he has the satisfaction of seeing now assembled in the school of which he was the founder a class of three hundred and forty-five. These facts we hold to be more decisive of the question than any man's opinions.

And here we dismiss the subject, we trust, forever. We hope our explanation will be satisfactory to our contemporary. He cannot feel a greater repugnance to professional bickerings than we do; and again we must express our unfeigned sorrow that anything from our pen should have drawn down from him upon us so grave a lecture. We are most happy when our editorial labors meet with the approval of our readers, and although we are not so sanguine as to expect ever to please all tastes, we do hope, henceforth, to be able to "plod" along our "weary way" without giving offence to our neighbor of the Lancet. Y.

THE WEATHER.

The month of December was the coldest month that has been experienced in this region for several years. The mean of February, 1841, we think it was, was 30°, since which time we have not known so cold a month until the present time. The mean temperature of December was 25°. Having had an early spring, a hot summer, and a late, mild autumn, we were prepared to see a cold winter. As the average of the three preceding seasons had been too high for our latitude, it was pretty certain that the annual mean would be restored by the only remaining season of the year. The latter part of November was intensely cold—one morning the thermometer in Louisville having stood at 4°, and in Jacksonville, Illinois, by report, 26° below zero. The mean of the four last mornings in the month was 16°. The mean temperature of December, at sun rise, was 19.2°; the highest rise at any time during the month was 48°; the lowest point to which it fell was 0°; for three successive mornings the range was 1°, 0°, 8°, and during two successive days the mean was as low as 5°.

December, it will hence appear, with the latter days of November, has gone far towards reducing the excessive heat of the previous seasons to the annual mean, and we may therefore look for open weather in January or February. The river was closed by ice early in December; the prediction of our meteorologists, founded upon the theory of a mean annual temperature, has been, that a thaw would occur, and navigation be resumed, before the end of January.

In connection with the weather, it seems appropriate to say something in regard to the prevailing diseases of the season. These, as was to have been expected, were of an inflammatory type—catarrhs, attended with acute pain in the frontal sinus in some cases, and with tonsilitis, in many, pleurisy and pneumonia. We witnessed a highly interesting case of each of the latter of these affections. The first a case of pleurisy, was presented in a little girl, about 7 years of age. It was complicated, after the first few days, with symptoms of gastritis. The case of pneumonia was a highly aggravated one; the subject of it was a lady, aged about 60 years, corpulent, and of excellent constitution. She was bled freely on the first day of her attack, and put upon calomel and antimony. The second night afterwards

the symptoms assumed the most alarming aspect; the dyspnœa was excessive, attended with lividity of countenance, and apoplectic signs. The venesection was repeated, and in the several bleedings amounted to ninety-six ounces of blood. Stimulants became necessary in the progress of the case, the result of which was favorable, as was also that of the case of pleurisy. The city may be said, at the present time, to be very healthy. Y.

LIFE AND TRIAL OF DR. ABNER BAKER.

This is a volume of 160 pages, by C. W. Crozier, containing the circumstances of the trial and execution of Dr. Baker, to which we have already referred in this number at considerable length. We allude to the subject again for the purpose of informing our readers that the volume has been published, and that it contains much matter which we were unable to embrace in our article. Much of it is of a character which one must regret to see circulated through all the walks of society; but it is so mingled with the history of the deplorable case that it could not have been omitted. The case is obliged to assume great importance in its relation to medical jurisprudence, and as such ought to be carefully studied by every physician and lawyer. Y.

INTRODUCTORY LECTURES.

The former custom in medical schools, of devoting six days to the delivery of as many introductory lectures, is giving way to the more economical one of a single public discourse, to which the didactic lectures immediately succeed. Professor Short delivered this discourse to the class in the Medical Institute at the opening of the current course of lectures, and, to the politeness of the class, at whose request it was published, we are indebted for a copy of it. The subject very appropriately chosen was, "*The Duties of Medical Students during their Attendance on Lectures,*" and these are indicated and enforced in chaste and beautiful language, of which the following impressive quotation may be taken as a specimen:

"Twenty-one years have now elapsed since I first became connected with a school of medicine, in the responsible character of Teacher of one of its branches. During the greeter part of that long time I have acted in the capacity of Dean,—an office which necessarily throws the incumbent into constant intercourse with the members of every class, thus rendering him intimately acquainted with the character and deportment, the habits and manners, the fate and fortunes, the failure or success of a large number of every class, and especially of those who have been candidates for graduation. Having then for so many years possessed—I will not say enjoyed—these opportunities of observation, I may be, in some sense, considered as speaking by authority when I say, that never have I known him who sowed to the wind, reap other harvest than the whirlwind—never have I seen the sober, industrious, and attentive student fail in the object of his ambition; but often have I seen the poor young man, struggling against adversities of all kinds, by dint of persevering application, victoriously surmount them, and attain to eminence and distinction,—and too often have I been called upon to witness the bitter tears of anguish and remorse, shed by the presumtuous idler over his blighted hopes and blasted expectations."

Professor Harrison's introductory, in the Ohio Medical College, and that of Professor Linton, in the St. Louis University, have also been laid on our table, and will be noticed in our next number.

Y.

NEILL ON THE NERVES.

We noticed, some time ago, a work on the Arteries, by Dr. Neill. The volume before us is of the same character, being designed to give to students a general idea of the anatomy of the nerves. As in the former production, the task has been executed with fidelity and skill, and in the plates delineating the origin and course of the nerves the student will find a clear and beautiful exhibition of this portion of anatomy. We heartily recommend the work to all students of medicine. Y.

LOUISVILLE SUMMER SCHOOL OF MEDICINE.

The lectures in the Louisville Summer School of Medicine will commence on the first Monday in April, under, substantially, the arrangements of the last season.

FACTS FROM CORRESPONDENTS.

We are indebted to *Dr. E. W. Harris*, of Cape Girardeau county, Missouri, for the following interesting communication relative to *Ergot* in cases of flooding and threatened abortion.

"In answer to Dr. Emery's question in the November number of the Western Journal, I will state, that in the year 1826, I was called to see Mrs. J. in the third month of pregnancy, taken six hours before my arrival, with flooding while ironing clothes. The os tincæ was found dilated, membranes protruded, pains regular but weak, and hæmorrhage alarming. Ergot was given with a view of arresting flooding by the expulsion of the uterine contents; in about half an hour the flooding was arrested, the pains ceased, the os uteri closed again, and the woman continued well for two months, when she was, while lifting a heavy burden, suddenly seized with labor pains, and, before my arrival, delivered of twins.

"Since then, I have, on four different occasions, with as many women, witnessed the cessation of *flooding* and *pains*, after the administration of ergot with the view of hastening abortion."

December 1, 1845.

THE

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THE

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FEBRUARY, 1846.

ART. I.—*A Case of Uterine Hydatids; their expulsion attended by alarming Hæmorrhage; Recovery.* By ISAAC EDWARDS, M.D., of Leavenworth, Indiana.

Mrs. C——, a married lady, æt. 18 years, of moderately full habit, but pale complexion, commenced menstruating in her sixteenth year, and menstruated regularly for nearly twelve months, the catamenia returning about every twenty-seventh day. In about twelve months after the appearance of the catamenial discharge, she took cold, which resulted in a suppression of the menses for two successive periods. Nature, however, at the end of the third month relieved herself; and from that time the lady had her regular periods, the flow being somewhat diminished, up to the second or third month after marriage. Her health during this time appeared to be very good, with the exception of one or two slight attacks of intermittent fever.

Between the second and third month after her marriage, she suffered a suspension of menses, but as this took place while she was apparently in good health, she and her friends were led to believe that she was in the family way. Afterwards, when I interrogated her more closely concerning her feelings about the time of the suppression, she remembered that about the time, or soon after the last uterine discharge, there commenced a burning pain within the pelvic cavity, which lasted, with intervals of freedom from it, for five or six weeks. This pain, however, was so slight that she had never thought proper to mention it to any one, and in fact she had forgotten it herself.

I was called to see the patient August 25th, and found her laboring under, as I thought at the time, menorrhagia, connected with abortion, but, as I afterwards learned, an affection of a different character.

On inquiry I found that she had been troubled with hæmorrhage for some ten days previously; the first symptoms having occurred not long after she had leaped from a horse, which first produced a watery discharge, followed soon afterwards by a considerable flow of blood from the uterus. She complained at the time of my first visit of a considerable headache and pain in the sacral region; the pain shooting out through the hips and around in front of the abdomen, and meeting on the linea alba. She also complained of pain in the left hypochondriac region. At intervals, these symptoms were accompanied by bearing down pains; but as yet these were not very severe. Considerable nausea attended, and sometimes vomiting. A sanguineo-mucous expectoration, slight laryngitis, with an entire loss of appetite, were additional symptoms. Her tongue was covered with a light yellow fur along its middle; mouth dry; considerable thirst. There was a blush on her cheeks between a scarlet and a purple, together with a pale circle around the eyes and mouth. The body was preternaturally warm; with the hands and feet moderately cool; pulse 105, but compressible; bowels constipated.

I prepared the compound rhubarb pills which I ordered her to take to the extent of opening her bowels.

Aug. 26th. Found the patient much better, with the exception of pains in her back and hips, which had become more distressing since the previous day. I now ordered a cantharides plaster over the seat of the pain, to remain on about three hours. I gave her also a gentle tonic, and no other medicine.

27th. Was sent for to-day in haste; and on arriving was informed that twelve hours previously, my patient had again commenced flooding; and that the hæmorrhage had been so great as to induce syncope several times.

On inquiry, I learned that the blister plaster had been allowed to remain on eight hours, and that strangury was the result, together with considerable bearing down pains.

In hope of still being able to avert an abortion, I administered opium and acetate of lead, and used an injection, *per vaginam*, of the lead solution, together with anodyne enemas.

This treatment relieved the strangury in about twenty-five minutes, and also controlled, to a considerable extent, the hæmorrhage; but this persisted in some degree, being sometimes alarming, during the fore part of the night.

About the middle of the night the bearing down pains returned, and increased so rapidly in strength and frequency that all hope of preventing an abortion was given up.

At 2 o'clock I was for the first time permitted to make a thorough examination. Applying my hand to the abdomen just out of cold water, to ascertain if there were any movements of the fœtus, which the lady assured me she had repeatedly felt, I could not perceive any signs of the presence of a child. The uterus, although it was sufficiently large for the seventh month of utero-gestation, did not feel as if it contained a fœtus, the mass, whatever it might be, feeling soft and spongy; this, however, I thought at the time, might be owing to coagula in the uterus. I endeavored in vain to

discover a fœtal circulation, and concluded, therefore, that if a fœtus was present, it must be dead.

Next, introducing the index finger of my left hand into the vagina, I ascertained that the os uteri had begun to dilate, and was open to about the size of a dime.

Finding all the means prescribed unavailing, and the patient exhausted from such excessive losses of blood, and concluding that the fœtus must be dead, I immediately determined to bring on labor as speedily as possible.

After communicating my determination to the friends, I gave her the secale cornutum in v. grain doses, repeated every fifteen minutes, together with small doses of the sugar of lead. As soon as these means began to act on the uterus, the hæmorrhage was found to cease; but it still returned again as soon as the effects of the ergot passed off, which appeared to be in about twenty or twenty-five minutes after it was given. I therefore kept it up after one or two intermissions. I gradually increased the dose of the ergot in quantity, but extended the intervals to twenty minutes. By the continued action of the remedy upon the uterus, the hæmorrhage was kept in check.

At half past 6 o'clock, A.M., I made another examination *per vaginam*, and found the os tincæ very much dilated; and protruding through it was a mass feeling so much like a placenta, that I told the woman that it was an after-birth presentation. The dose of ergot was increased to ten grains. About 7 o'clock the hæmorrhage returned more copiously, and I saw that unless there was a speedy delivery, the powers of the patient must succumb. Continuing to give the ergot, I now resorted to a stream of cold water upon the naked abdomen as an auxiliary, in the hope that more effectual uterine contractions might be induced. This I repeated several times, having the skin wiped dry after each application, in order to avoid the depressing effects of continued cold.

This had the desired effect; for immediately after the third dash, the uterus expelled the greater part of its contents. I

was of course very much surprised when I lifted the extruded body from under the sheet, to find that it was not a placenta or a fœtus, but a large mass of *hydatids.* They would have filled a half gallon measure. They were attached to what appeared to be, a blasted placenta.

The parent hydatids were three in number; the middle one being much the largest; the uppermost one when in situ being the next largest. The largest one was about the size and shape of a hen's egg. The largest of the three was the only one that appeared to be organized, and permeated by bloodvessels. It was composed of four different sacs; the innermost one was filled with a yellow serous fluid, not unlike the serum of the blood. The other two parent hydatids were similar to the largest. The larger of these two was composed of four, while the smallest was composed of only three sacs, one within the other. But all were filled with a fluid of the same character.

The parisitic, or secondary hydatids, took their origin from the three parents; the largest primitive one giving off three; the next largest, four; and the smallest, one; making eight in number. They were fastened to their respective parents by small pedicles or footstalks. These again gave off a large number of hydatids of all sizes, from that of a buck-shot up; each one being composed of more laminæ or membranes than one; some two, some three, and some four, but none of a larger number.

After these came away I introduced my index and second finger into the womb, by which I was enabled to detach and bring away the small remnant of the placenta which was left behind. I then gave the patient wine whey and sulphate of quinine, under which she gained strength very fast.

She is now enjoying very good health, but has not since menstruated.

December 31st, 1845.

Art. II.—*A Case of Abortion, the Fœtus having been retained four months after its death.* By Dr. Thos. C. Osborne, of Erie, Ala.

Mrs. E. W., a highly respectable lady of this place, aged 30 years, of a corpulent and sanguine habit, is the mother of three living children; she suffered an abortion two years ago caused by a stubborn chronic hepatitis. Her health improved from that time until the first of April, 1845, when she became satisfied that she was again pregnant, the evidences of which continued until the first of August, at which time, as she reckoned, she was four months advanced in utero-gestation. At this time, without any appreciable cause, she was attacked with pains in the back, &c., attended with contractions of the uterus, and a slight hemorrhage, of the character and consistence of the menstrual fluid. This condition, which lasted several days, was checked, promptly, by a few portions of acetate of lead and opium; but from the time of the attack until the embryo was expelled, three months afterwards, she never experienced a single symptom of pregnancy, neither was there, during that time, a return of the catamenia. This, together with an astonishing increase of corpulency, gave rise in her mind to the most painful apprehensions. She complained of strange and distressing sensations.

On the 27th of the following November, she discovered what she again thought to be the menses; but as the day advanced, the fluid assumed more the appearance of a hemorrhage, and, severe labor pains coming on, she was obliged to take to her bed. For ten hours the efforts of the uterus were almost intolerable, hardly allowing a minute's intermission from pain. Her strength was nearly exhausted, and although repeated doses of tincture of opium were administered, and copious venesection resorted to, the pains persisted, with alarming obstinacy, until the ovum was expelled.

This, upon examination, presented the following appearances:—Membranes thick, firm, and entire, containing five or six ounces of very turbid liquor âmnii, and an embryo of full

four month's development, in a state of incipient putrefaction. The head was large; the eyes, ears, nose, and mouth distinct; the extremities fully formed with the exception of the nails; the genitals very distinct; the entire length of the embryo being about six inches. The funis umbilicalis was 13 to 15 inches long, and arose from one side, instead of the centre, of the placenta. The fœtal surface of the placenta presented nothing further unnatural, but its uterine surface exhibited many abnormal appearances. In diameter it was about three inches; two-thirds of which was occupied by three distinct portions of a cartilaginous or fibro-cartilaginous substance; and the remaining third was taken up by a substance resembling an old clot of blood. Each portion of these masses was separated from the others by a furrow corresponding to the depth of the disease.

The largest, and yellowish portion of cartilaginous substance, was nearly as firm as the cartilage of the ribs. The next to it, was white, but pervaded by a slight tinge of red, and throughout it was the most granular substance I have ever seen. The third was of a dull white color, and felt under the knife like the substance of the mammary gland. The whole diseased surface was about four lines in thickness, and it was under the clotted part that the funis took its origin.

I have but few remarks to make on the above case.

Mrs. W. was certainly pregnant from the first of April to the first of August. She did not then abort, but if she had done so, there was not time, between the first of August and the 27th of November, for another fœtus to have reached such a stage of development as that attained by the embryo in this case. A complete interruption in the nutrition of the ovum must have taken place at the fourth month of gestation, and the disease of the placenta was the growth of the subsequent months.

December 28th, 1845.

REVIEWS.

ART. III.—*Urinary Deposits, their Diagnosis, Pathology, and Therapeutical Indications.* By *Golding Bird, A.M., M.D.*, Assistant Physician to, and Lecturer on Materia Medica at, Guy's Hospital; Licentiate of the Royal College of Physicians; late President of the Westminster Medical Society; Fellow of the Linnean Society of London; Corresponding member of the Philosophical Institute of Basle, of the Philosophical Society of St. Andrews, of the Medical Society of Hamburgh, &c., &c., &c. Philadelphia: Lea & Blanchard. 1845. 8vo. pp. 227.

[CONCLUDED.]

The lungs and kidneys are the great emunctories by which the effete matters of the animal body are eliminated—through the lungs, the matters rich in carbon passing away, in the form of carbonic acid, and by the kidneys, nitrogenised substances, as urea and uric acid, in the human subject. The uric acid of man is replaced in the horse and cow by an acid termed by Liebig the hippuric. Uric acid, according to this eminent chemist, is the first product of the metamorphosed tissues, and becomes urea by a higher oxidation. The acid, having its origin in a deficient supply of oxygen, should be found to exist in excess in diseases which impair the respiratory function, and Liebig states this to be the fact. Some researches, however, in urinary pathology, by Becquerel, render it doubtful. His observations and experiments do not appear to show that there is any fixed relation betwen the urea and uric acid in the urine. In chlorosis, where the blood discs are deficient, and where the urine, in accordance with the theory al-

luded to, ought to exhibit an excess of uric acid, he found it positively and relatively below the healthy average. In phthisis, again, where we should have looked for the full proportion of urea, and the smallest amount of uric acid, consumption being one of the diseases in which the oxidation of the blood is assumed to be excessive, it appears that instead of being 1 to 31, as in healthy urine, the uric acid was 1 to 7, in one case and 1 to 3½ in another.

But we have neither the leisure nor space to pursue these speculative questions, but must refer to the interesting work under review for a satisfactory discussion of them. Excluding all theories regarding the transformation of one excretion into another, we are authorised, in the view of our author, to infer, whenever we find an excess of uric acid or its combinations with bases in the urine, a normal quantity of water being present, (30 to 40 ounces in twenty-four hours,) that one or the other of the following states exists:—

A. Waste of tissue more rapid than the supply of nitrogenised nourishment, as in	Fever, acute inflammation, rheumatic inflammation, phthisis.
B. Supply of nitrogen in the food greater than is required for the reparation and supply of tissue, as in	Excessive indulgence in animal food, or the quantity of food remaining the same, with too little bodily exercise.
C. Supply of nitrogenised food not being in excess, but the digestive function unable to assimilate it:	All the grades of dyspepsia.
D. The cutaneous outlet for nitrogenised excreta being obstructed, the kidney is called upon to compensate for this deficient function.	All or most stages of diseases attended with arrest of perspiration.
E. Congestions of the kidneys, produced by local causes.	Blows and strains of the loins, diseases of genital apparatus.

But the fact most interesting to the physiologist and physician, is the comparative insolubility of uric acid. Whatever prevents the oxidation of this acid, and its consequent con-

version into urea, must be unfavorable to health, as it gives a tendency to calculous deposits, and otherwise injuriously acts upon the system, as pointed out by Dr. Bird in the following passage:

"Uric acid and urates may occur in great abundance in the urine, so as to become serious sources of irritation, and then especially become primary objects of attention as definite diseases. These bodies may be deposited in an insoluble form in the kidney or bladder, and aggregating, form a mass, on which, by a kind of imperfect crystalization, great portions of the acid or its salts may be deposited, giving rise to the formation of a calculus. Uric acid is of more serious importance than most other elements of calculous formations, not only from its constituting a large proportion of all urinary calculi, but even when they are chiefly composed of other ingredients, the nuclei on which they are deposited are, in the great majority of cases, composed of uric acid. In 374 calculi, contained in the museum of Guy's Hospital the nuclei were in 269 composed of uric acid or urate of ammonia alone."

Uric acid does not always form a deposit when it exists in excess, nor does a deposit necessarily indicate the existence of an abnormal proportion of it. It is not difficult to discriminate between these cases, for, in the words of our author—

"If a deposit of urate of ammonia be present whilst the bulk of the urine in twenty-four hours is not much below the average, it is certain that an excess of uric acid exists. But if the bulk of the urine be much below the natural quantity, a deposit may occur simply from there not being sufficient water to hold it in solution. To determine whether an excess does exist, let all the urine passed in twenty-four hours be collected, well shaken, and a given quantity, as about two ounces, mixed in a conical glass vessel with about half a drachm of hydrochloric acid. In six or eight hours crystals of uric acid will be copiously deposited on the sides of the glass; the urine should be decanted and replaced by cold water. By means of a thin spatula or feather, the acid can be detached and collected at the bottom of the vessel. All the water except the last few drops can be readily poured off without losing the precipitate, which can then be removed

into a watch-glass, dried, and weighed. This little operation is so easily performed, that it can scarcely be deemed troublesome; and by a simple multiplication sum, the whole amount of uric acid secreted in twenty-four hours can thus be readily ascertained."

Diet exercises a decided influence on the secretion of this acid, as is happily pointed out by Dr. Bird in the following paragraph:

"The copious deposit of urate of ammonia occurring after eating more freely of animal food than is required for the supply of the wants of the body is a well known phenomenon, and will occur in persons whose digestive organs are in perfect vigor, simply from a greater amount of matter being given them to assimilate than they are adequate to. In like manner, if a person's digestive powers are impaired, either partially or temporarily, as after a debauch, he will be unable to convert into healthy chyle even a small proportion of food, and hence its albuminous elements imperfectly assimilated enter the circulation, to be evolved by the kidneys and perhaps other emunctories. Particular idiosyncrasies with regard to the action of the stomach on certain articles of diet also exist; thus a single cup of coffee or green tea will, in many persons, determine the formation of a deposit in the urine, as if the caffein present in these two beverages had escaped the digestive powers of the stomach, and become converted into urate of ammonia."

The uric acid deposits are recognized by the following characters:

"When heated in the urine, the uric acid deposit does not dissolve; the crystals merely become opaque. It generally becomes more distinct from the solution of urate of ammonia, which is frequently mixed with it, and sometimes completely conceals it from view. Hence the best mode of discovering this deposit, is to warm urine, turbid from excess of urate of ammonia, in a watch-glass; the acid becomes visible in the centre of the glass, as soon as the urate dissolves. Heated with liquor potassæ, the uric acid deposit dissolves, from the formation of an urate of potass of sparing solubility. Hydrochloric and acetic acids are without any action, but the nitric readily dissolves it, and by careful

evaporation a residue of a beautiful pink color becoming of a rich purple, on being held over the vapor of ammonia, is left. This colored residue is the murexid of Liebig, the purpurate of ammonia of Dr. Prout. Exposed to heat in a platinum spoon, the uric acid deposits burn, evolving an odour of bitter almonds; and finally leave a small quantity of a white ash, which generally contains phosphate of soda or lime."

The two great points, in the treatment of uric acid gravel, are attention to the function of the skin, and restoration of the tone of the digestive organs. Suppression of the cutaneous excretion is found sensibly to increase the uric acid deposit, and the use of diaphoretics to diminish it. The influence of digestion upon the secretion of the acid has been alluded to, and in correcting the morbid action, the function of the stomach must be kept in view. Diet is the most important measure, and of this, our author says, the patient must use such as he can best digest, "it being of greater importance, in the majority of cases, to regard this, than to choose articles of food according to their chemical composition."

Of remedies which act as solvents of uric acid Dr. Bird makes mention of a number; among the rest, of soda and potassa, and, in the following terms, of phosphate of soda:

"The remarkable solvent action of phosphate of soda on uric acid, to which Liebig has lately directed attention, inspires a hope that its administration might be of use in cases of calculous disease, by impregnating the urine with an active solvent. All that is required to ensure this drug reaching the urine is to administer it in solution sufficiently diluted; ℥j. to ʒss. might be administered in any vehicle, as in broth or gruel, as when diluted, the phosphate tastes like common salt, and few persons object to its flavor. I have administered this drug in two very chronic cases of uric acid gravel, and in one with the effect of rapidly causing a disappearance of the deposit. This occurred in the person of a lady about forty years of age, who had, at my wish, for some weeks used the artificial Vichy water of the German Spa at Brighton without relief. The triple salt, ammonio-phosphate of soda, would perhaps be a more active remedy than the simple phosphate, but

its disagreeable flavor constitutes one objection to its employment."

The benzoic acid appears to have some claims upon the practitioner as a solvent of uric acid deposits. We quote our author's remarks concerning it:

"Much attention has been lately drawn to the effects of benzoic acid in preventing the formation of uric acid, by the observations of Mr. Alexander Ure. When this acid or its salts are administered, they are acted upon by the stomach in a very different manner from the other vegetable acids. Instead of becoming oxidized, and being converted into carbonic acid, it combines with those nitrogenised elements which would otherwise have formed urea or uric acid, and is converted into hippuric acid. It has been stated that the quantity of uric acid falls, when the benzoic acid is administered, below the average quantity, or even disappears from the urine. This has been, however, shown by Dr. Garrod, to be an error, and that urea alone disappears. Be this as it may, it is certain that the acid does appropriate to itself some body rich in nitrogen to form hippuric acid; and experience has shown that, in cases where an excess of uric acid is secreted, the administration of this drug appears to limit it to about the normal quantity."

He prescribes it in doses of eight or ten grains in syrup, or dissolved in a weak solution of carbonate or phosphate of soda thrice a day. The following formula he has found of great service in several cases of chronic uric acid gravel:

℞. Sodæ Carbonatis, ʒjss.
Acidi Benzoici, ℈ij.
Sodæ Phosphatis, ʒiij.
Aquæ Ferventis, f℥iv. solve et adde.
Aquæ Cinnamomi, f℥vjiss.
Tincturæ Hyosciami, fʒiv.
Fiat mistura, cujus sumet æger, coch. ij. amp. ter in die.

The next form of urinary deposit mentioned by our author is the *uric oxide*, termed by others *xanthic oxide*, which, however, is so rare a constituent of calculous concretions

that we need not stop to speak particularly respecting it. The resemblance between this oxide and the uric acid is so close that much care is required to distinguish between the two deposits; but this is a matter of the less consequence since the indications of cure are the same in each.

Purpurine is another pathological product of the kidneys, and is worthy of notice on account of the serious lesions of the liver or spleen, which its presence frequently indicates. It is so soluble in water that it never occurs as a deposit in urine, unless urate of ammonia is present; when this is the case, the ammonical salt assumes a more or less deep carmine tint. To appreciate the beauty of these tints, the deposite must be dried on a filter. Its appearance when so collected, together with its giving up the purpurine to alcohol, will distinguish it from blood, for which it has occasionally been mistaken. The characters of urine containing purpurine are thus given:

"It invariably happens that when an excess of urate of ammonia is present, it, on the urine cooling, falls to the bottom of the vessel, carrying down with it great part of the purpurine. If this excess be not present, the urine simply presents a pink or purple color, and on dissolving white and pure urate of ammonia in it by heat, it is precipitated on cooling deeply colored by the purpurine. If a small portion of purpurine only is present, it is best detected by adding a little hydrochloric acid to some of the urine previously warmed, a color varying from lilac to purple, according to the quantity of coloring matter present, immediately occurs.

"On evaporating urine containing purpurine to the consistence of an extract, and digesting it in alcohol, a fine purple tincture is obtained, the intensity of the tint being rather heightened by acids and diminished by alkalies.

"The specific gravity of this urine is subject to great variation: when the color is as deep as brandy, its density varies from about 1.022 to 1.030. The addition of nitric acid generally produces an immediate muddy deposit of uric acid, which has been more than once mistaken for albumen."

Another substance, now and then found in urinary sediments, and which enters into the composition of a rare spe-

cies of calculus, is *cystine*, the diagnosis of which is fully pointed out in the volume of Dr. Bird. The urine containing it is very turbid, and soon deposits a copious sediment, not affected by heat, and only slowly dissolved in nitric or muriatic acid; insoluble in the vegetable acids, but soluble in the fixed alkalis and their carbonates, and burning in a platina spoon with a peculiar and disagreeable odor. From urate of ammonia it is distinguished by not disappearing on warming the urine, and from the earthy phosphates by being insoluble in dilute muriatic or strong acetic acid.

The treatment in cases of this morbid secretion is not well understood. Most is to be done by attention to the health of the assimilative functions.

Dr. Bird has been led to question the accuracy of the opinion, according to which *oxalate of lime* is a very rare urinary deposit. He has met with it frequently, and holds it to be connected with certain nervous maladies which abound in populous cities. The digestive organs are deranged in those individuals who afford this deposit, and it is strikingly increased or diminished by particular kinds of food. It is, therefore, especially amenable to dietetic regulations. The symptoms attending it are described in the following words:

"Persons affected with the disease under consideration are generally remarkably depressed in spirits, and their melancholy aspect has often enabled me to suspect the presence of oxalic acid in the urine. I have seldom witnessed the lurid greenish hue of the surface to which Dr. Prout has referred. They are generally much emaciated, excepting in slight cases, extremely nervous, and painfully susceptible to external impressions, often hypochondriacal to an extreme degree, and in the majority of cases labor under the impression that they are about to fall victims to consumption. They complain bitterly of incapability of exerting themselves, the slightest exertion bringing on fatigue. In temper they are irritable and excitable; and in men the sexual power is generally deficient, and often absent. A severe and constant pain, or sense of weight, across the loins, is generally a prominent symptom. The mental faculties are generally but slightly affected, loss of memory being sometimes more or less pres-

ent. Well-marked dyspeptic feelings are always complained of. Indeed, in most of the cases in which I have been consulted, I have been generally told that the patient was ailing, losing flesh, health, and spirits, daily; or remaining persistently ill and weak, without any definite or demonstrable cause."

We come next to the consideration of the *earthy salts* of urine—phosphate of lime, ammonio-phosphate of magnesia, and carbonate of lime, the account of which in this volume is full and instructive. They occur in consequence of a deficiency of acid in the urine, as carbonate of lime is deposited on the escape of carbonic acid halding it in solution, and, indeed, it seems that "where phosphate of lime forms the great bulk of a deposit, a certain portion of carbonate is generally present."

The details on this subject are too numerous to be embodied in the limits within which we must confine ourselves, and for all that relates to the diagnosis and treatment we must therefore refer our readers to the work itself.

Until lately, *carbonate* of lime, although of constant occurrence in the urine of herbivorous animals, was not believed to enter into the composition of any urinary calculi in the human subject; but it turns out, that this substance often occurs in small quantities mingled with the earthy phosphates, and is more apt to be present when the urine is decidedly alkaline. Its origin, according to Dr. Bird, "may then be explained by a decomposition of phosphate of lime by the carbonate of ammonia which replaces the urea." It then appears simply as an amorphous powder, and may easily be recognized by its effervescence with any dilute acid, the carbonate of ammonia having been carefully washed out by warm water.

The urine is subject to discoloration, not only by blood and bile, but by various products of diseased action, among which are enumerated, cyanourine, indigo, per-cyanide of iron, melanourine, and melanic acid, from which it receives blue or black tints more or less intense. But as the presence of such

matters is not frequent their diagnosis and pathology need not detain us.

The following chapter is one of the most interesting in the volume, embracing *non-crystalline organic deposits*, such as albumen, hæmatosine, pus, mucus, milk, fatty matters, &c. These substances are to be detected by the microscope, other tests being comparatively unavailing. This remark, however, is not applicable to *albumen*, which gives an opacity to urine on the application of heat. If it be abundant, the urine will become quite solid when so treated, and the opalescence will vary according to the quantity present in the urine. Nitric acid also coagulates albumen, and if these tests concur, its presence is no longer doubtful. The two ought always to be applied in conjunction.

When blood is present in urine, that fluid is more or less discolored, according to the quantity, and as albumen is one of the constituents of the blood, it will be found that the urine under such circumstances is coagulable by heat and nitric acid; but in order to render the diagnosis clear, in doubtful cases, the microscope must be applied. In reference to the treatment of hæmaturia Dr. Bird says—

"No remedy has, however, appeared to me to be of such extraordinary value in the treatment of hæmaturia as gallic acid. I have seen this drug arrest for many weeks bleeding from an enlarged (and fungoid?) kidney, after all other remedies had failed. It should be given in doses of five grains in a draught, with mucilage, and a little tinct. hyoscyami, and repeated at short intervals. This drug really acts as a direct astringent, reaching the capillaries of the kidney, and finding its way into the urine, which soon becomes so impregnated with it, as to be changed into ink on the addition of a few drops of tinctura ferri sesqui-chloridum."

Milk, it appears, has never been detected in the urine as a morbid element, but is sometimes present as a fraudulent admixture. The milk-like urine often seen, derives its appearance from phosphatic, purulent, or fatty secretions mingled with it. Still, Dr. Bird concedes that some of the ingredi-

ents of milk may be contained in the urine of pregnant women, having been taken into the circulation from the mammary glands. *Kiestein* is the name proposed for the matter detected in such cases; and *gravidine* has also been suggested, but Dr. Bird is not satisfied of its being a distinct organic principle.

Spermatozoa are by no means very unfrequent in urinary deposits, in some cases imparting to the urine their characteristic odor.

"Should a larger quantity of the secretion be present, it subsides to the bottom of the vessel, and may be recognized by its physical character. If mere traces of spermatic liquor only are mixed with urine, they may easily be detected by violently agitating, and allowing it to repose in a conical glass vessel for a few hours. On carefully decanting all the urine except the last few drops, the spermatozoa may be detected in the latter by the microscope."

From a series of observations recently made, there is strong reason to believe that fermentation is attended, if not produced, by the appearance of certain confervoid or fungoid vegetations, which pass through regular stages of development. When the urine contains sugar these vegetations make their appearance. The account given by our author of these appearances is highly curious. He states that—

"When saccharine urine is left in a warm place, a scum soon forms on its surface, as if a little flour had been dusted upon it. This consists of minute oval bodies which soon enlarge from the development of minute granules visible in their interior. These continue expanding, and dilate the oval vesicle containing them into a tubular form; soon afterwards the internal granules become larger and transparent, and project from the exterior of the parent vesicle like buds. The whole then resembles a jointed confervoid growth, which ultimately breaks up; and a copious deposit, of oval vesicles or spores, falls to the bottom. All these stages of development require but a few hours for their completion. If the deposited spores be placed in weak syrup they rapidly germinate, and exciting fermentation, produce a new crop of torulæ. During the growth of the torula, bubbles of carbonic acid gas are evolv-

ed, and the urine at length acquires a vinous odor, sometimes accompanied by an odor of butyric acid."

And, "still they come;" not only *torulæ*, these little mushroom plants, but *vibriones*, minute animalcules, "are occasionally developed in the urine, so soon after passing as to lead to the idea that their germs must have existed in the urine whilst in the bladder."

In the concluding chapter, at which we have arrived in our cursory notice, Dr. Bird makes some judicious practical remarks on the therapeutical employment of remedies influencing the functions of the kidneys. These remedies have been often complained of by writers as capricious and uncertain in their action, and the complaint is just, as practitioners too well know. But there is a cause for this variableness in the action of diuretics, and without stopping to inquire into the nature of it, we quote from our author certain laws deduced from the recorded experience of the medical profession, the observance of which will enable us to predict with a great degree of certainty what will be the effect of these therapeutic agents:

"*Law 1st.* All therapeutical agents intended to reach the kidneys must either be in solution when administered, or capable of being dissolved in the fluids contained in the stomach or small intestines, after being swallowed."

"*Law 2d.* Bodies intended to reach the kidneys must, to ensure their absorption, have their solutions so diluted as to be of considerably lower density than either the liquor sanguinis, or serum of blood (i. e. below 1.028)."

"*Law 3d.* 'If a sufficent quantity of water cannot be received into the small intestines, or the circuit through the portal system in the vena-cava ascendens, or thence through the lungs and heart into the systemic circulation, be obstructed, or if there be extensive disorganisation of the kidneys, the due secretion of urine cannot be effected.'"

The following practical conclusions should be appended to the foregoing laws:

"1. Whenever it is desirable to impregnate the urine with a salt, or to excite diuresis by a saline combination, it must be exhibited in solution, so diluted as to contain less than 5 per cent. of the remedy, or not more than about twenty-five grains in an ordinary draught. The absorption of the drug into the capillaries will be ensured by a copious draught of water, or any diluent, immediately after each dose.

"2. When the urine contains purpurine, or other evidence of portal obstruction exist, the diuretics or other remedies employed should be preceded or accompanied by the administration of mild mercurials,—taraxacum, hydrochlorate of ammonia, or other cholitic remedies. By these means, or by local depletion, the portal vessels will be unloaded, and a free passage obtained to the general circulation.

"3. In cases of valvular or other obstructions existing in the heart and large vessels, it is next to useless to endeavor to excite diuretic action, or appeal to the kidneys by remedies intended to be excreted by them. The best diuretics here will be found in whatever tends to diminish the congested state of the vascular system, and to moderate the action of the heart; as digitalis, colchicum, and other sedatives, with mild mercurials."

The reader who wishes to study the subject of urinary deposits by the best light of modern science, will avail himself of the aid offered in the pages of this work. It must take precedence of all the treatises on that subject.

ART. IV.—*Elements of Pathological Anatomy;* Illustrated by colored engravings and Two Hundred and Fifty Woodcuts. By SAMUEL D. GROSS, M.D., Professor of Surgery in the Medical Institute of Louisville; Late Professor of Pathological Anatomy in the Medical Department of the Cincinnati College; Surgeon to the Louisville Marine Hospital, etc., etc. *Second Edition, thoroughly Revised and greatly Enlarged.* Philadelphia: Ed. Barrington & Geo. D. Haswell. Louisville: James Maxwell, jr. 1845. Super-royal 8vo. pp. 822.

[CONTINUED FROM PAGE 48.]

In our last number we followed the author through the chapters on inflammation and the effusion of serum; we proceed now to notice some of the remaining conditions and consequences of the inflammatory process.

CHAPTER IV.—*Lymphization.* The effusion of lymph, according to the author, like that of serum, is invariably of in-

flammatory origin; so invariably that "it may be assumed as a general proposition, than which there is none more satisfactorily established in pathological science." Except the followers of Macartney, few at the present day will deny this. Yet like as with serum, it is often the only symptom to be met with after death. In arachnitis large quantities are often poured out, though not the slightest redness, thickening, or opacity, can be discovered. Its appearance is not uniform, but may be modified by a variety of circumstances.

"In general, it is transparent, and of a white, yellowish-white, or opaline tint; but it may be opake, cineritious, milky-white, or reddish. In jaundice, I have seen it of a pale yellowish hue, from the presence of the coloring matter of the bile. At first it is very soft, semi-liquid, or almost diffluent, and so viscid that it may be drawn out into thin filaments; but it gradually increases in consistence, assumes a retiform arrangement, and feels very much like a mass of cobwebs moistened with water. When sqeezed, it yields a small quantity of fluid identical with the serum of the blood."—46.

Its microscopical characters as depicted by Gulliver, are given by the author, but as they are almost unintelligible without the accompanying cuts, we make but the following extract:

"Under the microscope, the mass of lymph is found to be composed of a great number of globules, connected together by a transparent matrix, and pervaded by exceedingly minute granules. The globules are of the same size as those of pus, and are at first very loose in their texture, but become gradually more dense and compact. In many cases, the substance consists of delicate fibrils, straight, transparent, running parallel with each other, and interspersed with small granules." —46.

Like other secretions, lymph is separated from the blood by a peculiar process; in chemical composition it is essentially the same wherever it occurs, and is similar to, if not identical with, the fibrin of the blood. It is now known that the

quantity of fibrin in the blood is increased during inflammation, generally in direct proportion to the intensity of the morbid action.

Effused at first in globules, which become confluent, this substance assumes various forms, governed in some measure by that of the part producing it. In the mucous cavities, as the larynx, it sometimes moulds itself upon the part; in the peritoneum it is seen in bands and films; in the pleura it occurs in lamina or sheets; in the cellular tissue its shape is irregular. Likewise it varies in amount. The non-assimilative structures, as the serous sacs, appear to furnish it most abundantly. It is produced less abundantly and far less readily by the mucous membranes, though the mucous lining of the respiratory and intestinal tubes sometimes furnish it in large quantity. It is observed in the uterus and the œsophagus; it causes obliteration of the bronchia, fallopian tubes, and biliary ducts, stricture of the urethra, adhesion of the vagina, and closure of the lachrymal canal. It is furnished readily by the inner coat of the arteries, less by that of the veins; it is yielded sparingly by the skin and absorbents, the muscles and fibrous membranes, the tendons and ligaments, the cartilages and bones. Of the viscera, those furnish it most abundantly in which there is the greatest amount of loose cellular tissue.

The deposition of lymph takes place soonest when inflammation is most intense; it is also influenced, as we have just seen, by the nature of the affected part. The author has seen it covering the pleura and peritoneum nine hours after a gun-shot injury; Thomson observed it in the inferior animals four hours after the infliction of a wound; and in some cases it is thought to begin with the inflammation itself.

This effusion, wherever it occurs, may sooner or later become organized, endowed with bloodvessels, with absorbents, and by inference with nerves; may secrete, and absorb, and nourish itself; may, under the inflammatory state, pour out serum, tubercles, lymph, pus, and blood—in short, it may do all

those, acts and things which distinguish an original part of the living body.

This organization takes place most readily in connection with the serous sacs, the skin, cellular tissue and bones, and not at all, or only after long contact, in the mucous canals. It is not always the most intense inflammation which is most favorable to it, but rather the slow, moderate action. In the former case, it would seem that this substance is not well elaborated, or is furnished in such large quantity that a portion degenerates into pus. In certain inflammations, as erysipelas, lymph is readily effused, but it is ill-elaborated, of weak vital power, and the pus subsequently poured out is not walled about by it as in phlegmonous inflammation, but is diffused among the tissues causing an immense degree of mischief. The same thing occurs in connection with poisoned wounds, in many of which the exciting cause produces rapid deterioration of the blood, and consequently the lymph secreted from it is of a degenerate character. In other inflammations of a low form, occurring in certain states of constitution, attended by poor or watery blood, the organization of the effused matter is imperfect; it is liable to ulterior changes—contraction, shrinking—to softening, from inflammatory reaccession—and these changes are the source of injury to the surrounding parts.

The vascularization of lymph may take place in a few hours from the time of its commencement, or occupy several months. Home injected an artery and vein in some lymph, twenty-four hours after its effusion. The mode in which it is produced, has given rise to a good deal of discussion. According to one opinion, blood corpuscles escape from the adjacent original vessels, and after oscillating for a time in the effused lymph, shoot across and join the return veins; through the channel thus formed other corpuscles follow in a continuous stream, establishing its circulation; and from this first channel others are formed in a similar mode. The other opinion supposes the lymph to have a self-organizing power, by virtue of which it creates its own bloodvessels. We have already alluded to the microscopical characters of

lymph when first effused. Its spontaneous coagulation is one step towards vascularization. In this state it presents numerous fibrils crossing each other in various ways, mixed with "exudation corpuscles" simple and compound—the former consisting of groups of granules and molecules; the latter, of cells with nuclei and nucleoli (granules and molecules). This is already a species of organization, and it may advance to a higher grade, or it may degenerate. When the former occurs, it is supposed (for the process is not exactly ascertained) that the compound exudation corpuscles (the cells with nucleoli) called nucleated cells, arrange themselves linearly, elongate, and form a communication by decadence of the opposing walls; in the channel thus formed the central or contained nuclei first oscillate, then are moved forward by the heart's impulse received through the neighboring vessels, and finally enter the general circulation. The nuclei are succeeded by blood corpuscles escaped from the adjoining capillaries, and thus, as before, canals are formed continuous with the original vessels. Others attribute to the lymph the power to form its own blood as well as bloodvessels, like the germinal vesicle of the embryo. The author gives the following account of the changes which take place whilst this self-organization is going on, without reference to the modern cell-theory:

"The primordial traces of the organizing process consist, according to the theory under consideration, in the appearance of a few red dots, which have been happily compared to the 'salient point' in the vitelline membrane of the chick, the fibrin being endowed, as was before stated, with a similar property of generating blood. Red furrows, streaks, or lines, are sometimes perceived, shooting out in various directions, which gradually assume the character of distinct vessels, in every respect analogous to those in other parts of the body. In other cases the small sanguineous trains take on a ramiform arrangement, and are ultimately converted into real vascular tubes. At an early period of their development, these trains are found, according to Laennec, to contain minute filaments of fibrin, permeable at their centre, which soon assume a cylindrical shape, and thus constitute the rudiments of the

future vessels. These new channels, composed both of arteries and veins, the latter of which, however, predominate as well in volume as in number, gradually extend towards the neighboring parts, with the capillaries of which they finally inosculate, the blood passing freely from the one to the other. In their mode of arrangement, many of these vessels resemble the vena portæ; that is, they consist each of a single trunk, usually of considerable length, from each extremity of which are detached a certain number of branches, twigs, and filaments."—49.

Has this organized matter nerves and absorbents? The existence of both might be inferred from the fact already stated that false membranes perform the functions of secretion, absorption, and nutrition. The *absorbents*, however, have been demonstrated by Van der Kolk, who succeeded in injecting them with quicksilver.

The lymph thus organized forms the basis of the *analogous* tissues; and "by it wounds unite, bones knit, and arteries are consolidated." Upon its susceptibility of organization, and the capability of tissues to produce it, are founded many of the improvements of modern medicine and surgery. The tying of arteries for aneurism, the treatment of incised wounds, whether made by the surgeon or otherwise, and the different auto-plastic operations, are all based upon a knowledge of this wonderful power of organization. Indeed it may be said generally that when the practitioner knows the *habitudes* of the different tissues and organs in a state of inflammation, their liability to this or that effusion, whether serum, lymph, pus, or blood, he has gained a vast step in the way of prognosis and treatment. For example, if the surgeon have a wounded intestine he knows it will be useless to attempt a union of the two mucous surfaces; for morbid anatomy teaches the general truth, that mucous membranes are indisposed to the production of organizable lymph; but that between the two serous surfaces he may get a speedy and safe union. So with the physician: if he have to deal with an inflamed larynx, morbid anatomy teaches him that the danger consists in a closure of the glottis by an effusion of serum into the sub-mu-

cous cellular tissue; if it be the trachea which is inflamed, that the danger arises from the effusion of lymph upon the mucous surface. We might bring forward other instances, but it would lead us too far, and besides they will suggest themselves to the mind of the reader.

A third product of inflammation, indicating a degree beyond that in which lymph is produced, is pus. In reference to the origin of this matter, the author says emphatically, that "*the formation of pus, in whatever part of the body occurring, is invariably the result of inflammatory action, either acute or chronic, simple or specific.*." Among the viscera, the lungs, liver, and kidney present pus most frequently; among the tissues, the cellular, cutaneous, mucous, and serous. All parts of the serous and mucous systems are not equally liable to it. As to the former, suppuration occurs most frequently in the pleura, the vaginal tunic of the testicle, and the serous linings of the larger joints. In the mucous system, it is much more frequent in the colon, than in the stomach or ileum, in the vagina than in the uterus, in the urethra than in the urinary bladder, in the nose than in the mouth, in the fauces than in the œsophagus, in the bronchiæ than in the larynx. The blood-vessels do not often suppurate, but the lymphatic system is frequently affected. Pus is deposited at first in globules; by softening and disintegration of intervening tissues, these become confluent, constituting abscesses; of these our author speaks of three kinds: the *acute*, the *chronic*, and the *metastatic*. The time required for the formation of an acute abscess depends upon a variety of circumstances; in the viscera from twelve to fifteen days; in the sub-cutaneous cellular tissue, less than a week, sometimes less than two days. Acute abscesses are rarely found in the lungs, brain, spinal cord, and spleen, death occurring before they have time to form. Situated externally, they tend toward the surface of the body; whereas visceral abscesses open into a splanchnic cavity, or into some hollow organ. The matter is often enclosed by a layer of organized lymph, called by Delpech the *pyogenic membrane*, varying in thickness from a fraction of a line to several lines, smooth and

glistening, sometimes villous and granulated internally, and rough and flocculent externally.

In chronic abscesses the collection forms slowly, often unaccompanied by pain, heat, &c; whence the name *cold* sometimes applied to them. The cyst surrounding them, is of a dense fibrous or fibro-cartilaginous texture, often of considerable thickness. They are generally connected with the scrofulous diathesis, and occur most frequently in the sub-cutaneous cellular tissue, the lymphatic ganglions, and the dorso-lumbar portion of the spine. When the matter passes from one part to another it constitutes the *congestive abscess.* The *metastatic* variety affects most frequently the viscera, and of these, according to Dance, the lungs and liver, then the spleen, then the brain, heart, and kidneys. The number varies from one to many hundreds; the size—inverse of the number—varies from a hemp-seed to an orange. The contents of this abscess, especially when recent, are almost always semi-concrete, of a dirty greyish, or drab color; when of longer standing, they are more decidedly purulent. The surrounding parts may be healthy, but are generally altered in appearance, being engorged, discolored, softened, or converted into a pulpy substance; the coats of the vessels exhibit the marks of inflammation, in which the capillaries participate. These abscesses follow severe wounds, especially of the head; capital operations; compound dislocations and comminuted fractures; they occur also in the puerperal state, and after phlebitis, erysipelas, typhoid fever, &c. Their formation goes on stealthily, and generally requires from ten to fifteen days. "The most prominent symptoms are, violent rigors, usually paroxysmal in their character, delirium, stupor, prostration, and general insensibility." As to the cause of these collections, our author believes, with Cruveilhier and others, that they are the result of phlebitis, and that they may occur independently of suppuration in the organs which sustained the primary mischief.

With the appearance of pus—*healthy* or *laudable*, as it is called, as well as the *sanious*, the *fibrinous*, the *scrofulous*—the

reader is doubtless familiar. The microscopical characters of pus are not unimportant. It consists of opake corpuscles suspended in a thin transparent liquor, mingled with more or less of the softened and disintegrated tissues of the part where it is formed. The characteristic pus globule consists of a spherical and externally rough envelope, composed of fibrin, containing two or three opake and exceedingly minute spherical granules, and some fluid. These globules are something larger than the red particles of the blood, and are evidently the exudation corpuscles, which, instead of undergoing further development, have degenerated. The author gives a full account of the analysis of pus by different individuals; from all which it seems to contain every element of the blood except the coloring matter. Purulent matter is frequently *contagious;* but to the eye in such cases it does not differ from that of common inflammation. Animalculæ have been observed in the matter of chancre, and in that from cancerous ulcer.

Pus, according to Gendrin and others, is sometimes an intra-vascular formation; if so, it must pass out of the vessels ere yet it takes on the globular form and while still granular, as the pus corpuscle cannot escape otherwise than by rupture of the vessel. It is sometimes absorbed; large abscesses are thus got rid of; in this case, again, the pus corpuscles must recede to the granular state, as, without rupture of a vessel, they can no more pass in than out. The fibrin of the pus thus absorbed seems to be unfitted for further use in the economy, and is eliminated through the kidneys.

Hemorrhage, which makes the subject of the fifth chapter, next claims our attention. Hemorrhage occurs under two very opposite conditions of the system: one a state of vascular repletion, or plethora, which it so often relieves; the other, and most frequent one, a state of anæmia, when blood is small in quantity and poor in quality. The morbid alteration of the blood which most frequently accompanies hemorrhagic effusions, is, according to Andral, diminution of the quantity

of fibrin. Hemorrhage is most frequent in the mucous, cellular, and serous systems; and in the mucous system, is most frequent in the large bowel, then in the stomach, then in the ileum. Of the viscera, the brain and lungs are by far the most often affected. Hemorrhage occurring in the interior of a part is termed *extravasation.* The word *apoplexy*, formerly applied to effusions in the brain, is now used in reference to all extravasations.

When speaking of inflammation it was seen that a period came when the distended and softened coats of the vessels gave way, allowing the blood to escape in mass. Unquestionably rupture of the vessels is much the most common cause of hemorrhage, whether accompanied by inflammation or not. It is thought, however, that the blood may be secreted—exhaled—that is, pass out of the vessels by a sort of vital "endosmose, diapedesis, or transudation."

"Analogically," says the author, "it may be inferred that the blood vessels are in a state of morbid activity, whereby fluids are suffered to escape that were appointed to be retained; or it may be supposed, as we have reason to believe is often actually the case, that the capillaries, being in a state of debility and relaxation, have their pores rendered unnaturally patulous, and thus allow the blood to have a more ready egress."—64.

What sort of "morbid activity" this is, we do not exactly understand. Any activity of which we can conceive, would be directly opposed to transudation, whether vital or mechanical. That there is a loss of tone by the capillaries in many hemorrhages, we can readily understand. Still, as in the case of pus, in the present state of our knowledge, it is impossible to see how the unchanged blood particles can escape from the unruptured vessels. In the frog, Williams (*Outlines Path.*, Amer. Ed., p. 195) states that he has seen the red particles roll up like a rice wafer previous to passing through the walls of the vessels. Does an analogous change of form occur in human blood? Red particles are to be seen in the fluid poured out in many cases of hemorrhage; but may not these escape from rupture of some of the smaller vessels,

whilst the great bulk of the so called blood consists of the liquor sanguinis and the coloring matter? But we will not pursue this subject any further.

The disposition to hemorrhage may be *hereditary.* Sometimes it affects all the male or female descendents for several generations; in other instances it disappears in one generation and re-appears in another, affecting indifferently both sexes. Hemorrhage is *vicarious.*

"As its name imports, it is supplemental of a similar natural or morbid state in a remote organ, and is most frequently observed in young females, in consequence of the tardy appearance of the menstrual flux, or from its suppression after it has been established. In the great majority of cases, it is located in the mucous membrane of the nose, and recurs with considerable regularity every lunar month, until the obstruction, of which it is the result, has subsided. Occasionally the blood oozes from the skin, the eye, ear, lung, anus, and even the nipple, either simultaneously or successively."—66.

Again there are *critical* effusions, as in protracted fevers, where vital power is lowered, and irregular accumulations of blood occur in certain organs.

When blood is effused it may be rejected, as when it occurs in the intestinal tube; or absorbed, as in the lungs and brain; or remain and become organized; or, lastly, act as a foreign substance, inducing fatal inflammation. As to the absorption of blood, the same difficulties occur as in the absorption of pus. The blood globules cannot pass unchanged into the vessels, any more than they can pass out, unless there be rupture of the parietes.

Softening—mollescence, ramollissement—the subject of the next chapter, is one of the most unequivocal signs of inflammation; occurs, though not with equal frequency, in nearly every organ in the body; and in some structures, the tendons and cartilages for example, is almost the only sign of inflammation. It is frequent in the brain and spinal cord, in the spleen, the liver, and the mucous membrane of the intestines.

It is common in the bones, and sometimes pervades the entire skeleton, constituting *osteo-malacia.* The inflammatory action accompanying it is generally acute, though sometimes it is of a mild or chronic grade. Rostan thought that in the brain it sometimes depends on ossification of the arteries; Bennett has shown that in these cases it is a modification of the process of suppuration. Softening would seem almost necessarily to precede suppuration and ulceration: the tissues are first filled with serum or the other fluid elements of the blood; nutrition is overborne, cohesion impaired; and molecular disintegration ensues, with discharge or absorption, or both.

A softened organ may be unnaturally white, as in the brain, or red, as in the lung (red hepatization), or any intermediate shade of color. The seat of this lesion seems to be for the most part in the cellular element, as might perhaps be inferred from its universality. It is also a post-mortem occurrence, as in the lung from gravitation or stagnation of the blood, and in the stomach from the action of the gastric juice.

Chapter VII. treats of *Gangrene*, which term the author uses as synonymous with mortification and sphacelus. We pass this chapter with a notice of one or two points.

Gangrene may arise from an impoverished condition of the blood. This is seen in the ill-fed, ill-clothed, and ill-housed children of the lower orders of society, in whom it attacks the groin, axilla, and feet, and the mucous membrane of the mouth and vulva. In France, Switzerland and Germany, the lesion is frequent, occurring in terrible and devastating epidemics, from the eating of grain affected with *ergot.* The parts which most frequently suffer are the extremities, generally the lower; it may involve a part or the whole of an extremity; is in most cases preceded by the local symptoms of inflammation; the parts are left unusually dry and hard, the gangrenous odor being generally absent. Similar effects have been produced by feeding spurred rye to some of the lower animals. The disease from this cause is rare in this country, especially in the valley of the Mississippi. It has prevailed at different times in Pennsylvania and New York among horned

cattle; and in these instances, according to Mease, arose from the use of the *green grass*, the poa viridis of the botanists, the seeds of which were affected with ergot. Inflammation running rapidly into gangrene has been seen by Barbier and others to follow the inordinate action of emetic substances; the gangrene attacked the feet and toes, the hands, chin, lips, nose and ears; and seemed to arise from the sudden and great reduction of the powers of life.

Senile gangrene, occurring most frequently in the lower extremities, especially the feet and legs, is not confined, as the name imports, to the old. Of sixty-seven cases collected by Hecker, one occurred between the 1st and 10th year, six between the ages of 10 and 20, seven between 20 and 30, nine between 30 and 40. The largest proportion, however, occurred between the ages of 50 and 60, and 60 and 70, there being twelve in the former period, and nineteen in the latter. The progress of this affection is generally slow, and often unaccompanied by any local symptom except the discoloration. Pott, who first described it, thought it most frequent in males, in the proportion of twenty to one. In France the proportion is nearly the same in both sexes. In the cases just referred to, collected by Hecker, the males are to the females less than two to one. The author has seen but three cases, two of which were females. The cause is "undoubtedly inflammation of the lining membrane of the vessels, especially of the arteries, leading to an effusion of lymph, and the formation of coagula, fibrinous concretions, and other extraneous products in their interior." This may be so; we are disposed to think it is, in view of the dry, moistureless, and withered state of the affected part; but still may it not be the consequence of the disease, instead of its cause?

Ulceration is the subject of the eighth chapter. By this term the author understands "the solution of continuity of a texture from the absorption of its molecules." It is synonymous with the *erosion* of the older writers, and with the ulcerative absorption of Hunter and the modern pathologists. This lesion is by far the most common in the skin, mucous mem-

branes, and cellular tissue. Next in order come the heterologous formations, the bones and teeth, the articular cartilages and their coverings. The proper serous membranes, the fibrous and muscular structures, rarely suffer; nor do any of the internal organs except the uterus. The blood-vessels have a remarkable exemption from this lesion; arteries are occasionally seen playing away whilst all around them is undergoing rapid destruction; the vessel in such cases is protected by a coating of lymph. The mucous membranes of the respiratory and the genito-urinary organs are rarely ulcerated. In the intestinal canal, the ileum and colon are much oftener affected than the stomach. Ulceration may be rapid or slow; destroying a large portion of one or several tissues in a few days; or enduring for months and years as in bone, skin, and mucous membranes. In its progress, it tends towards the nearest surface, or towards the termination of the arteries, as was mentioned in speaking of abscess.

The great cause of ulceration is inflammation conjoined with pressure. It may occur without pressure, as in the skin and mucous membranes; and again, pressure seems to be the chief cause, as in caries of bone from the presence of an aneurismal tumor. As predisposing to this lesion, may be mentioned that condition of the blood in which its solid or fibrinous elements are wanting, and in which, as we have already stated, irregular accumulations or congestions take place in various parts of the body. Vital power is lowered, and from trivial causes, from the application of blisters, from slight blows, inflammation is set up, and terminates in "a foul, sloughy, and irritable ulcer." Bed-sores of the hips and buttocks occur in low states of fever; old wounds break out afresh and fractures are disunited in scurvy; and in animals fed on non-azotised articles of food, ulceration attacks the cornea and other textures. The pain attending ulceration is sometimes inconsiderable; again it is "of a dull-aching or gnawing character, as if insects were feeding on the part." Sometimes it is constant, sometimes intermittent, sometimes

periodical; and often is accompanied with hectic fever, rapid emaciation, and great reduction of the vital powers.

Ulceration is not always to be deprecated. It enables abscesses to *point;* it brings foreign bodies to the surface; and in old drunkards it forms a sort of safety valve by establishing sores on the extremities, thus saving them in all probability from internal disease.

We have quoted the author, and other writers, as saying that ulceration of a part depended upon absorption of its molecules. But is this true? We think not. Our limited space will not justify a discussion of the subject here, even if it were likely to be attended with any practical benefit. We cannot help remarking, however, that absorption is either diminished, or absent during the inflammatory process; that in the heterologous formations, ulceration readily occurs, absorption never; that previous to gangrene, arteries, veins, absorbents—everything is glued up by coagulable lymph, and that the dead part is pushed off as it were by pus, which flows away mingled more or less with the debris of the dead and dying tissues. In short, without denying that absorption sometimes exists, ulceration seems to us, in most cases, to be death by molecules, as sloughing and gangrene are death in mass.

Chapters IX and X.—We come next to *granulation* and *cicatrization.* Both are subjects of vast interest, but our notice of them must be brief.

Granulations are small, red, pointed, somewhat firm bodies, composed of coagulating lymph, which becomes organized in the manner previously mentioned. They are highly vascular; the vessels, which may be demonstrated by injection, are arranged in a tuft-like form, and those of adjacent granulations communicate only at the base. These little bodies are sensitive, sometimes extremely so, and hence have nerves; they are capable of absorbing various substances, and are themselves sometimes absorbed. They are developed most readily in parts that are lax and vascular. In mucous membranes, aponeuroses, ligaments, tendons, cartilages, and bones,

they form tardily, and these are structures in which lymphization is imperfect. They are rarely seen in any of the viscera except the brain.

Cicatrization is the healing of wounds and ulcers, and, like resolution and gangrene, is a proper termination of the inflammatory process. All the textures of the body may be thus regenerated, except cartilages and muscles, and in one instance the author has seen muscular substance renewed. This regeneration, however, is never perfect. In cicatrix of the skin, for example, the inner surface of the new production is not reticulated, the mucous net-work is imperfect, there are no sebaceous follicles, nor follicles containing hairs. Cicatrices are liable to inflammation, and vital power being feeble, they are thus easily destroyed; to hypertrophy, and hence they have a rough knobby feel, and dense fibrous structure, creaking under the knife; to inordinate contraction, as after burns, producing horrible deformity, and after severe mercurial salivation, causing rigid and firm closure of the jaws; to semi-malignant growths, in the shape of a small dry excrescence covered with cuticle, soon becoming moist and partially ulcerated, secreting thin fetid and semi-purulent fluid, by and by converted into a more solid tumor—scirrhus or encephaloid—as large as a pullet's egg, followed by ulceration, fungous granulations, and death from accompanying discharge and irritation. After a cicatrix is removed, the second sometimes shows the same disposition to contract. Two years ago we saw a case of closure of the jaws from mercurial sloughing and ulceration of the gums and cheeks. The parts were perfectly rigid, the lower jaw scarcely moveable and firmly held against the upper by thick bands and sheets of fibro-cartilaginous structure. These were divided, with slight but temporary improvement. Next they were entirely removed, after which the jaw had considerable motion, and a machine was constructed so as to keep it constantly depressed. But it proved fruitless; for, as cicatrization went forward again, so did the gradual but firm contraction, rendering the counteracting force insupportable; and the

little sufferer was sent away unrelieved. The malignant growth, just mentioned, rarely returns when removed.

The chapters that we have now noticed include the more direct and immediate conditions of inflammation. Before proceeding further it may not be amiss to remark that, although these conditions, or terminations as they are called, are thus isolated for the purpose of study, they do rarely, if ever, actually so occur in the living body. For example, the effusion of serum, except when it serves, like hemorrhage or bloodletting, to resolve or cut short an inflammation, is never seen alone, but exists throughout the whole process. In cicatrization, itself an absolute termination, there is an effusion of serum, of lymph, and of pus, not to mention organization, all going forward at once. Ulceration and suppuration co-exist with scarcely an exception, and both, as we have already intimated, are generally preceded by softening. Suppuration is seen in connection with lymphization, hemorrhage, and effusion of serum; as is fully recognised in the terms *fibrinous*, *sanguinolent*, and *serous*, applied to pus. Thus it is readily seen how complex a process is that of inflammation.

The succeeding chapters are devoted to some of the more remote consequences of inflammation—Induration, Hypertrophy, and Atrophy. By *Induration* the author means an increase of consistence in an organ, whether arising from deposition of new matter (excluding heterologous formations), from deficiency of natural secretion, or from transformation of some of its tissues. This lesion is an exceedingly common one, common to all the tissues in the body, though not equally so; occurs at any age, and even during intra-uterine life; exists alone, or associated with other alterations; and may affect a part or the whole of an organ, or only one of its anatomical elements. The *size* of a part indurated, like its *color*, may be natural, augmented, or diminished. An increase of size is most frequent, as in the liver, spleen, and lymphatic ganglions; so, too, the weight is more frequently above than be-

low the natural standard. The *degree* of induration depends upon a number of circumstances.

In reference to the time required for the production of this disease, it may be said to be chronic, occupying weeks and months and years, as is far the most frequent; or acute, occupying but a few days. The chief cause of this lesion, is a deposition of coagulable lymph as a consequence of inflammation. Along with this there is frequently poured out, as in the lungs, more or less of the coloring matter of the blood, or the blood itself, giving the affected structure a red color. In hardening of the cellular tissue in infants, the coloring principles are two: one an orange red, the other bluish. Induration from deficiency of the natural secretion, is seen in the general drying up of the organs and tissues in old people; being most considerable in the cellular tissue, mammæ, ovaries, prostate gland, the voluntary muscles, and the bones. Induration from transformation, or the disappearance of some of the elements of an organ, is occasionally seen in the liver, spleen, and lungs, around hydatids, serous cysts, tubercles, &c. The lung affords an example when the copious effusion in chronic pleuritis reduces it to a mere cake, *ex*pressing its fluid contents, and *com*pressing its solid elements. Induration from this last cause is constantly associated with atrophy.

Induration when suffered to continue may lead to the cartilaginous, the fibro-cartilaginous, and osseous transformations. Of the two forms, the acute and the chronic, the latter is most amenable to treatment; which is something directed to the removal of morbid deposits—iodine and kindred articles internally, stimulating frictions externally—and must be long continued.

Hypertrophy, frequently accompanied by the last affection, is not so widely diffused, as no one has ever seen it in the serous membranes, ligaments, tendons, or fibrous envelopes. There are few, however, who have not observed it in the adipous tissue, heart, spleen, thyroid body, &c. &c. Like induration, too, it occurs at all ages, and, in the case of the thymus gland, possibly during uterine life. Hypertrophy may be

general, occurring (with the restrictions just mentioned) in nearly every organ and tissue of the body at the same time; or local, occupying a single organ, or, w hatis more frequent, a part of an organ. The causes may likewise be general and local. Of the former we know but little. Among the local causes chronic inflammation holds an important place. It produces enlargement of the spleen, the liver, and the lymphatic ganglions, developes the follicles and villosities of the mucous coat of the intestines, and thickens the mucous tunic of the bladder. Increased action of an organ, to overcome some mechanical impediment to the performance of its function, is another cause: as in the heart, from hindrance to the exit of blood; in the muscular coat of the stomach, from obstruction at the pylorus; in the urinary bladder, from stricture of the urethra, or enlargement of the prostate. Hypertrophy also follows increased action in the discharge of healthy function. This is seen in the lung, the kidney, and the muscles of voluntary life. It is simply the physiological law upon which the physician acts when he directs, "plenty of exercise and plenty of fresh air," to give vigor and power to the enervated frame. An enlarged organ may have its consistence increased (induration), diminished (softening), or unaltered; the former is much the most frequent. Increase of weight is generally present, unless there be at the same time atrophy of some other element. Increased volume is by no means constant. Change of form occurs when the lesion is partial.

Atrophy, although existing sometimes in connection with hypertrophy, is a totally opposite lesion. Hypertrophy consists in an exaltation of the nutritive function, atrophy in its imperfect exercise. In the one, the body will attain the weight of seven hundred pounds, without an unusual quantity of aliment; in the other, it will fall to fifty-eight, with the usual quantity of food. General atrophy (marasmus, emaciation, consumption) attends divers chronic diseases of the lungs, heart, and stomach, It also occurs in the progress of age—*senile* atrophy.

"All animals have a period of growth, maturation, and decay. In the human subject, the body, after having reached the age of forty, begins to exhibit traces of decline, which from this time on become gradually more and more conspicuous, until the machine is literally worn out, and man 'goeth to his long home.' Examined at this period, the whole mass of the brain is generally found diminished in size, the nerves have lost their moisture, and the ganglia connected with them are condensed, and considerably shrunk in volume. The respiratory system experiences similar changes: the lungs are dryish, inelastic, and increpitous, their volume is sensibly lessened, the walls of the air-cells are attenuated, and whole lobules are sometimes deprived of their vesicular structure. The muscles of voluntary life are pale, flabby, and diminished in bulk; the arteries, veins, and absorbents shrink in their diameter, and a large proportion of the more minute ones, becoming useless, are obliterated, and lost; the lymphatic ganglions are hard, small, and many of them entirely dispapear; the bones are spongy, brittle, and extremely prone to fracture; the ligaments are unusually slender; the articular cartilages dry, and attenuated; and the salivary glands, together with the liver, pancreas, spleen, and kidneys, are indurated, and considerably reduced in size. In the male sex, after the functions of the testicles have ceased, absorption frequently commences in these bodies, which shrink, become soft, pulpy, and are sometimes not larger than a French bean. The cells of the penis are augmented, and their fibrous parietes very much attenuated, in some iustances even partially absorbed. In the female, the ovaries are pale, shrivelled, and frequently transformed into a condensed greyish substance; the mammæ are soft and flabby, with scarcely a trace of their original structure; and the uterus is hard, firm, and diminished in volume."—89, 90.

Local atrophy may affect the whole or a part of an organ, or one of its constituent elements; may exist singly, or in conjunction with hypertrophy, induration, or softening. The causes are: the cessation of function in an organ, as in the pupillary membrane, and wolffian bodies before birth, the ovaries and thymus gland after birth; diminution of nervous influence, as in the arm and leg from pressure on the axillary and sciatic plexuses; deficient supply of blood, as in the testicle when the spermatic artery is tied; inflammation, as in the

gall bladder from the presence of biliary calculi, and in a thousand other cases.

The subject of the next chapter is one not found in the former edition, nor is it noticed, except incidentally, in most of the treatises on morbid anatomy.

A Fistule—fistula, as it is generally termed in the books—is always a consecutive disease, is developed by various causes, and may be formed wherever there are two contiguous cavities, or a cavity and an external surface. It has usually two openings, and then is said to be *complete;* when there is but one opening, it is termed a *partial* or *blind* fistula. Fistules receive various epithets according to their situation; as anal, recto-vaginal, vesico-vaginal, perineal, broncho pleural, &c. They vary in length from a few lines to several inches; the largest usually observed in connection with psoas abscess, between the kidney and lung, and between different coils of intestine. The diameter is sometimes exceedingly small, scarcely admitting a bristle, as in lachrymal fistula; or so large as to admit the finger. The track may be straight, or exceedingly tortuous and winding; may communicate externally by one or several openings; and may have branches ramifying from it. A recent fistule is nothing more than a granulating surface; by-and-by it becomes lined by coagulable lymph, a true pyogenic membrane, of variable thickness—at first more or less red, afterwards white, grey, or bluish—smooth upon its free surface, or mammillated and villous—and covered by a thin glairy fluid, which is more or less mingled with the secretion of the part upon which the fistule opens. This lining membrane, in old cases, often acquires the consistence of fibro-cartilage; and the surrounding parts are likewise rendered firm and callous by coagulable lymph.

"There is a variety or form of fistule which may be regarded as a remnant of embryotic organization. Its most frequent situation is the antero-lateral part of the neck. Like the ordinary fistule, it may terminate in a cul-de-sac, or it may have two orifices, of which the external is sometimes scarcely visible. The abnormal passage itself is usually very narrow, and seldom extends beyond two or three lines in depth."—94.

We come next to *Transformations*, which means "those changes which a pre-existing tissue undergoes, as it is being converted into another that is totally different from it, but which has its analogue in the animal economy." Those admitted by the author are the cellular, mucous, cutaneous, fibrous, cartilaginous, osseous, and adipous. We shall have an opportunity of noticing these in connection with the different organs and tissues, and shall therefore pass them by now, with the remark that they are most frequent in old age, and in the opinion of the author are invariably dependent upon inflammatory irritation.

Chapter XVI.—*Pneumatosis, or collections of aëriform fluids.* Examples of this affection are familiar to all, in pneumo-thorax, emphysema, tympanitis, &c. The quantity of aëriform fluid is subject to great diversity: it may occupy the entire body, as in emphysema; or be restricted to a few lines, as in the lung; it may puff up the intestines, paralysing their muscular coat, displacing the abdominal organs, and interfering with the descent of the diaphraghan; or enlarge the uterus so as to simulate pregnancy. The *physical* and *chemical qualities* of the fluid are subject to equal diversity. In the lung and sub-cutaneous cellular tissue it generally occurs after wounds, and then resembles in all respects the atmosphere whence it is derived. In other situations it contains variable quantities of oxygen, carbon, hydrogen and nitrogen—sometimes it is inflammable from the large admixture of hydrogen, sometimes the reverse from the predominance of carbonic acid gas. In the alimentary canal, uterus, pleura, and in scrofulous abscesses, it is mingled with a greater or less quantity of sulphuretted hydrogen.

Air may find admittance through a wound, as in emphysema of the lung and sub-cutaneous cellular tissue; or through some natural opening, as when it is swallowed, or when it collects in the vagina and uterus from relaxation of the former organ. Again it may arise from the operation of chemical agents; as in the uterus, from retention of blighted ovum, portions of placenta, or of fœtal membranes, which undergo decomposition; in

the intestinal tube, from the play of chemical affinities among the heterogeneous articles of food, especially when digestion is disordered; in the chest, when there is a collection of sero-purulent fluid; and in hernia, when sphecalus occurs. Lastly, it may result from a true vital process of exhalation or secretion. Analogical evidence is furnished by the fact that exhalation of oxygen and absorption of carbonic acid is constantly taking place in vegetables, that just the reverse process is going on with equal constancy in the human lung, and that the air in the air-bag of fishes is evidently secreted. It is ascertained also that an aëriform fluid exists in the blood, consisting, according to Krimer, of oxygen, carbonic acid, and hydrogen. Extrication of gas in different parts of the body has been observed to follow excessive losses of blood.

Spontaneous pneumatosis is most frequent in females about the decline of the menses. The development may be rapid; or gradual—some cases of physometra lasting for months and years. Sometimes it recurs periodically, every day, or every other day; it is also supposed that it may be hereditary, but the evidence is not conclusive. C.

[TO BE CONTINUED.]

ART. V.—*On Diseases of the Liver.* By GEORGE BUDD, M.D., F.R.S., Professor of Medicine in King's College, London; and Fellow of Caius Cambridge. *With colored Plates and numerous Woodcuts.*—Philadelphia: Lea & Blanchard. 1846. 12mo. pp. 392.

It is not a great many years since the Liver figured conspicuously in every system of pathology. The influence of this great organ was recognised in almost every disease. We had treatise after treatise upon liver complaints; and fevers, dropsy, dyspepsia, and a host of other maladies were traced to congestion of the portal circle. In derangement of the liver, and cutaneo-hepatic sympathy, and want, or disorder of hepatic secretion, we found an explanation of half the ailments that flesh is heir to.

But "a change came o'er the spirit of our" medical literature; and it is now a long time since we had a volume on the diseases of the Liver. The Lungs, the Heart, the Kidneys, the Skin, and the Nervous System, have usurped its place, and been extorting the attention long bestowed upon it.

This, perhaps, is not difficult to account for. Medicine, unquestionably, is assuming more the character of an exact science. The profession had grown weary of the vague conjectures respecting hepatic diseases, and hepatic sympathies, while it was led away to the affections of the chest, for the investigation of which new and more accurate methods had been discovered; and to those of the skin and kidneys, which were either visible, or afforded, at least, some index to their nature in one of the excretions. The changes wrought by disease in the lungs and heart could be detected by the ear; and some knowledge of the lesions of the kidneys might be gained by the analysis of the urine; but percussion threw very little light on the morbid changes in the liver, and its secretion could not he collected and analysed. Thus, while precise information was attained in respect to the physical condition of other organs, to detect and distinguish the diseases of the liver, practitioners had little more than the signs of functional disturbance. Hence, for so long a time, no addition has been made to the number of our guides in the discrimination and treatment of these disorders. The work before us has appeared opportunely, and will meet with a hearty welcome from the profession.

Very recently, this author remarks, "two of the impediments to the study of diseases of the liver have been in some degree removed." He refers to the precise composition of the bile, with a knowledge of which modern chemistry has furnished us, and to the insight we have gained by the microscope into the intimate structure of the liver. He begins his work with an account of the minute organization of that viscus, some of the points relating to which have only lately been made out. We cannot follow him in this interesting description, but will not leave the subject without reference

to one point—the office of the *nucleated cells in effecting secretion*, which is now considered an established fact in physiology. The author remarks on this head:—

"It is not in the liver only that the cells perform this office, for it seems established as a general law, and it is certainly one of the highest and most interesting which the study of minute structure has yet disclosed—that all true secretion, whether in animals or in plants, is effected by the agency of cells; that, 'however complex the structure of the secreting organ, these nucleated cells are its really operative part.' In each secreting organ, the secreting cells have a peculiar power to form, or to withdraw from the blood, the secretion proper to the part.

"In such of the glands of animals as have excreting ducts, the nucleated cells withdraw from the blood the peculiar principles of the secretions, which they elaborate more or less, and then, in one way or other, whether by bursting, or dissolving, or by some unknown mode, discharge them through the excreting duct."

In regard to the quantity of bile secreted by the human subject, we are in possession of no certain information, some physiologists rating it at a very few ounces, while Haller and Burdach have estimated it at from seventeen to twenty-four ounces. There can be no question that the amount varies in different individuals, and in the same person under different circumstances. That the quantity rises in some cases to the estimate of Burdach and Haller, is shown by the following extraordinary case, quoted by the author from the Medico-Chirurgical Transactions:—

"A strong, healthy man, a thatcher, fifty-four years of age, injured himself by lifting a heavy ladder, on the 28th of August, 1843. When seen by Mr. Barlow, the same day, he complained of so much pain in the region of the liver that a rupture of that organ was apprehended. He was very faint, in a cold sweat, and the pulse could scarcely be felt. Some brandy and water was given him, and he recovered sufficiently to be taken to his own house, which was about three miles distant. Five grains of calomel and a grain of opium were given him at night, and an ounce of castor oil the following morning, which operated and produced several natural evacuations.

"On the 29th he was bled, and continued the calomel and opium, with a dose of saline mixture, every five hours.

"On the 30th it was observed that the evacuations from the bowels were white and without bile, while the urine was dark, as in jaundice, Five grains of blue pill were ordered every six hours.

"As the pain in the region of the liver continued, the bleeding was repeated at different times, and a blister was applied over the right hypochondrium. The same medicine was continued till the 15th of September, when a swelling, the size of a walnut, was observed over the region of the liver. This gradually increased, and on the 9th of October, was so large and caused so much pain from distension, that it was thought proper to tap it. Seven quarts of fluid were drawn off, which from its color and taste appeared to be pure bile. The pain was instantly relieved, and the swelling entirely subsided.

"The fluid collected again, and it was necessary to repeat the tapping on the 21st of the same month, when six quarts and a half of fluid were drawn off. This fluid was analyzed by Dr. Pereira, Dr. G. O. Rees, and Mr, Taylor, and found to be composed in great part of bile. Dr. Rees guessed the proportion of bile in the fluid to be at least eight parts in ten.

"On the 31st of October he was tapped again, and seven quarts were drawn off. On the 9th of November the operation was repeated for the fourth time, when six quarts were withdrawn. On the 18th of November he was taken to St. Bartholomew's Hospital, and tapped again, when nine pints of fluid escaped. The cyst was not emptied as on the former operation, and he suffered extreme pain from the tapping, which he had not previously done. On the following day, bile appeared in his stools, and the urine was lighter colored. On the 3d of December, the motions were of proper color, containing plenty of bile. The swelling gradually subsided, and towards the end of the month he became quite convalescent. In the beginning of February he was able to walk eight or ten miles; and when an account of his case was presented to the Society, appeared to be in good health."

Whatever may be the fate of certain conjectures respecting the final destination of the bile, it is impossible to regard it as purely excrementitious. In the first place, only a very small quantity of it is evacuated by the bowels, and this is conclusive against that supposition. But the fact that it is emptied so high up into the alimentary canal shows that it is

designed to take part in the nutritive function. Digestion cannot be completed without it, and one of its purposes, doubtless, is to aid in the perfection of that process; nor is its relation to respiration less direct and fundamental. Whatever embarrasses the lungs affects the liver. If they perform their function less efficiently, it has more to do. A change of climate, which implies a change in reference to the consumption of oxygen, is felt especially by the liver. Imperfect oxidation devolves more labor upon the liver, the office of which is to depurate the blood of various elements, the retention of which would be hurtful to the system. Exercise and diet, in like manner, influence the secretion of this organ, by affording to it more or less carbonaceous matter to be removed in proportion to their amount. Our author gives illustrations of this view of the subject in the following passage:

"Thus, for example, may be explained many of the bilious disorders of hot climates. If, in such climates, the food be not regulated in accordance with the smaller needs of the economy as to animal heat, an excess of bile is formed, and disorder of the stomach and intestines—bilious vomiting, and diarrhœa—are the consequence.

"Hence, also, the general repugnance to rich meats, and the greater tendency which these and spirits unquestionably have to produce disease of the liver, in hot seasons and in tropical climates.

"In the same way may be explained the greater frequency of bilious disorders in middle life, when men begin to take less exercise, and their respiration becomes less active, while on the other hand, the tendency to indulgence at table but too often increases.

"We may also often see inverse evidence of these relations in the effect of pure air and active exercise, in relieving various disorders that result from repletion, and from the retention of principles, which if not burnt in respiration, should pass off by the liver as bile. Every sportsman must have remarked the effect of a single day's hunting in clearing the complexion. It has, no doubt, much the same effect on the liver, as on the skin."

Most persons, our author concludes, "have more liver, as they have more lung, than is absolutely necessary." But in

others, this viscus is just competent to the task of purifying the blood from its bilious principles, when in healthful activity. Such persons are born with a tendency to hepatic derangements. Slight causes derange the balance, and they suffer for the want of due bilious secretion, when they change their climate, indulge in gross living, take too little exercise, or become costive. They grow bilious, sallow, and dyspeptic, because the liver is not depurating the blood. Exercise, laxatives, and reduction of diet are followed by relief,—the first promoting a more active combustion of the carbonaceous elements; the last giving the liver less to do. The action of medicines on the liver elicits from our author the following remarks:

"Various medicines seem to fulfil to a certain extent the 2d object, that rendering the liver more active, and increasing in this way the secretion of bile. Mercury, iodine, muriate of ammonia, and taraxacum, have undoubtedly an action of this kind. The first and the last of these medicines, especially, have long been in this country the chief resources of the physician in the treatment of chronic hepatic disorders. The marked temporary benefit often resulting from mercury given for this effect has from the difficulty of distinguishing the various diseases of the liver, and the consequent indiscriminate use of the drug, led to great evils. This medicine was at one time, by English practitioners, given almost indiscriminately, and long persevered in, for disorders of digestion, many of which did not depend on fault of the liver at all, but on local disease of the stomach or intestines, or on faulty assimilation, the result of debility, which the prolonged use of the mercury but too often increased. Of late, these evils have much abated, but still, before the diagnosis is rightly made, mercury is often tried in cancer, and other incurable organic diseases of the liver, in which this and other powerful and lowering remedies can only do harm."

The following are the heads of the subjects embraced in this volume: Congestion of the liver; inflammation of the liver, gall-bladder, and ducts; softening, fatty degeneration, and scrofulous enlargement of the liver; excessive and defective secretion of bile; gall-stones; cancer, and hydatid tumors of the liver; jaundice.

Congestion of the liver, which fills so large a space in many treatises on the affections of that organ, occupies but seven pages in this work. It is divided into *hepatic-venous* congestion, *biliary* congestion, and *portal-venous* congestion. The anatomical characters of congestion of the liver are deep color and increased size, which, generally, are not attended by pain, and only by a sense of weight and fulness, with a slight jaundice tint. Depending upon mechanical obstruction of the circulation, in the heart or lungs, as is generally the case, the remedies for hepatic congestion are to be addressed rather to the primary affection than to the liver. They embrace purgatives, venesection, diuretics, and diet. Where the congestion has its origin in an altered state of the blood itself, as where it accompanies purpura hemorrhagica, the treatment is still less satisfactory. Congestion from fever and ague is the form most successfully treated.

Dr. Budd holds that inflammation ought not to be divided into acute and chronic, but classified according to the cause producing it. He cites inflammation of the knee in illustration, which may be connected with gout, or with gonorrhœa. In the first case it is curable by colchicum; in the last, that article is inoperative. So in other instances we must know the cause, before we can apply the remedy.

Inflammation of the liver he divides into *suppurative*, *gangrenous*, and *adhesive;* to which he adds inflammation of the veins of the liver, and of the gall-bladder and ducts. Abscess of the liver, the result of suppurative inflammation, may originate in either of these causes; namely: 1st. *a blow;* 2dly. *suppurative inflammation of a vein;* or, 3dly. *ulceration of the intestines, stomach, or gall-bladder.* To one or the other of these causes, he contends, all cases of hepatic abscess may be traced; and whether he has fully established his position or not, he has, at least, rendered it highly probable.

[TO BE CONTINUED.]

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Case of Intermittent Fever complicated with Purpura Hæmorrhagica: cured by Quinine and Nitric Acid. By W. W. Leak, M.D., of Cass county, Ga.—Mr. ——, aged 75 years, a wagon-maker by trade, of plethoric habit and somewhat intemperate—says he has been unwell for two weeks, and on the 29th of Sept. had a chill followed by fever. Soon after this there was an appearance of blotches over various parts of the body, especially on the lower extremities; he had also some spitting of blood; and on the 30th another chill and fever, with vomiting of blood.

At 3 o'clock, P.M., of the 30th, he presented the following symptoms:—countenance pale; headache; pulse a little more feeble than natural, and soft; has cough; some oppression in the chest, and expectorates a little blood; oozing of blood from the mouth and nose; has no appetite; some tenderness over epigastric region; extravasation of blood under the cuticle on various parts of the body, especially on the lower extremities and neck; some bloody vesicles on the tongue as large as peas.

Prescription.—V. S. 4 to 6 ounces, which relieved the pain in head and chest.

℞ Calomel, 6 grs.
Dover's powder, 6 grs.
Acetate of lead, 3 grs.
Mix.

Divide into three powders, and give one every third hour. An ounce of castor oil to be taken at night; warm pediluvi-

um with salt. Eight grs. sulph. of quinine, 2 grs. to be given every hour, commencing at 7 o'clock, A.M.

Oct. 1st, 8, A.M. Patient better in all respects, except there is no disappearance of the blotches; has had no cough since the first powder was taken.

Prescription.—10 grs. of calomel, to be followed by oil; a teaspoonful of elixir vitriol to one pint of sage tea, to be taken during the day; acetate of lead and Dover's powder to be given if the hæmorrhage returned; 20 grs. sulph. quinine, one-fourth to be given each hour, commencing in the morning at 7 o'clock.

2d, 8, A.M. Had a chill yesterday at 1 o'clock, followed by hæmorrhage from the mucous surfaces. Pulse 110, and quite feeble. In consultation with my friend, Dr. Milner, we determined on giving the nitric acid according to the formula in the August No. of the Southern Medical and Surgical Journal, of Dr. J. J. Bradford.

℞. Nitric acid, ʒi.
Pulv. gum arabic.
White sugar, *āā.* ʒii.
Water, ℥v.
Mix.

Of this, we gave one tablespoonful every six hours, instead of a half tablespoonful, as is recommended by Dr. B.

3, P.M Patient is easy; pulse 100; hæmorrhage less. To continue the acid, with 25 grains sulphate of quinine, one-fonrth to be given each hour, commencing in the morning at 7 o'clock.

3d, 8, A.M. Patient rested well last night; had no hæmorrhage except per rectum and urethram, which was not so copious as previously. Pulse 80. Continue the acid.

5, P.M Had no chill to-day. Pulse 72; complains of his head and ears ringing; the blotches are disappearing; his bowels have been moved once or twice. 12 grains quinine to be given in the morning in 3 gr. doses, commencing at 7 o'clock.

4th. Improvement in all respects; blotches disappearing very fast. The acid to be continued for a few days. Dismissed the case to day.

Although this patient has had two or three chills since, we learn there has been no recurrence of the purpura.

The indication in this case was to check the chill, and though the disease complicating it, purpura hæmorrhagica,

was abated by the prescriptions first employed, still we think its cure may be clearly attributed to the nitric acid.—*Southern Medical and Surgical Journal.*

Hydrocele Cured by Electricity.—Dr. F. Campbell Stewart mentioned having recently cured a large hydrocele, seventeen inches in circumference, and thirteen and a half from pubis to its base, by *electricity;* one needle was inserted into the cavity of the tunica vaginalis testis, also one through the cellular tissue over the scrotum. The application of electricity was continued half an hour, and was attended with intense pain. In forty-eight hours the fluid had entirely disappeared. A second case treated in a similar manner was not successful.—*Proceedings of the N. Y. Med. and Surg. Society.*

Insanity in a boy four years of age, following Fright.—Dr. James Macdonald related a case of insanity, occurring in a healthy boy, four years old. The first symptoms seemed to follow a fit of anger. He was refused permission to go into the country, and became very much excited. In the evening he was punished. This was followed by paroxysms of terror, the child having a frightened and startled look; sometimes he would become violent, striking at those around him, &c. This was in the latter part of June: there was heat of head, and the digestive organs were deranged. These latter were attended to, and then the shower-bath ordered; it however occasioned such terror that it was discontinued. A seton was placed in the back of the neck: some improvement followed, but the child again became worse, and gradually fell into a state of *idiocy*, passing urine and fæces involuntarily, losing the use of language, and acquiring a dull heavy look. The child was removed to the country, and on returning was attacked with intermittent fever of a tertian type. This was permitted to take its course, and continued till December. During its continuance, the mind gradually recovered its powers, so that by the middle of December the patient was entirely restored. There has been no instance of insanity in the family.—*Ibid.*

Hay Asthma.—Dr. Swett also had met with another singular case: He had been called into the country to visit a

gentleman 70 years of age, apparently laboring under asthma. The patient, who had always been healthy and free from cough, rose at night, laboring under a violent paroxysm of dyspnœa. A physician was called in, who bled him with some relief, but the disease recurred. The paroxysm would generally last 15 or 20 minutes, and then subsiding, the patient would remain free from distress for several hours. On one occasion, the interval had been as long as 48 hours. Dr. S. found the patient on his arrival apparently well, with the exception of slight oppression of breathing. On examination the respiration was found good, the action of the heart regular, and the pulse regular. Recollecting that asthma was occasionally brought on by breathing particular odors, Dr. S. inquired whether the patient had been exposed to anything unusual of the kind. The physician in attendance stated that he had, on the day of the attack, been employed in getting apples from a pit covered with hay. The hay and a portion of the apples had decayed, and gave out an offensive odor, which was probably the cause of the attack. Reference was then made to several cases, in which asthma had been produced by similar causes. The case of Dr. Perkins was mentioned, in whom asthma had been invariably produced by the smell of ipecacuanha. Dr. P. one day entered a drug store, and was instantly seized with the oppression of breathing, which precedes an attack. On inquiring, it was discovered that a clerk had two hours previously opened and exposed the powder of ipecac in weighing half an ounce. *Ibid.*

Chorea.—Dr. Beadle stated that on a former occasion he had reported several cases of chorea, successfully treated by the use of the tincture of black cahash (*actæa racemosa*), that he had recently given it to a patient aged nine years, but not with the usual good effects. He had then resorted to Fowler's solution, five drops three times daily, with the effect of speedly accomplishing a cure.—*Ibid.*

Fatal Vaccinia during Whooping Cough.—Dr. Vandervoort reported a fatal case of vaccinia during whooping cough. The child was apparently of a healthy constitution, and vaccinated with the view of cutting short the disease. He was called to see the child on the third or fourth day, when hæ-

morrhage had occurred at the point of vaccination. The hæmorrhage had much increased during the paroxysm of coughing. This state of things continued for three weeks, notwithstanding the treatment, which had consisted in the application of cold and astringents, the child dying at length in a state of perfect anemia.—*Ibid.*

Epilepsy.—Dr. Macdonald reported a case of epilepsy in a man aged 45 years, who previously had enjoyed fair health; although he had had symptoms of dyspepsia. He was attacked during the night, after returning from a fishing excursion, having been observed by a friend who slept in the same room. Dr. M. saw him in the morning; he continued in the epileptic state till 12, A.M., without five minutes' cessation. The convulsions were frightful; and so severe that it was ten days before he became conscious of his situation. The pulse remained unaltered. He was bled, and counter-irritants were used all over the body. Administered 220 drops of tincture of opium in two separate portions. Convulsions shortly ceased.—*Ibid.*

Hemiplegia.—Dr. Foster reported a case of hemiplegia in a child during dentition: he had lost the use of the left leg entirely, but had the partial use of the left arm. The treatment consisted in the use of stimulants, applied externally; under which the limb had been restored.—*Ibia*

Quinine—its effect upon the Spleen, Liver, &c.—Dr. Van Buren, of the U. S. Army, closes a paper in the N. York Journal of Medicine, on quinine, with the following observavations:

"I have never seen a case of disease of the liver or spleen, which could—on the most remote evidence—be attributed to the use of quinine, either in large or small doses.

"Of the qualities of the sulphate of quinine as a *pure tonic in small doses* I have received an unfavorable impression, in the debility following diseases of this climate. Used in this

manner I believe that it acts only as a direct and peculiar permanent stimulant, and that it has a greater tendency to induce general irritability of the system than other and more simple vegetable tonics, with a decidedly unpleasant effect in many instances upon the mucous membrane of the intestines, and the brain.

"I have never recognized its action upon the liver.

"After stopping an intermittent fever by a full dose of quinine, unless the system requires decided support, I am not in the habit generally of administering tonics; and I have never witnessed more satisfactory cases of prompt and uninterrupted convalescence than while pursuing this plan of practice. In cases which required a supporting treatment, the indigenous tonics of the country—the prunus Virginiana and cornus Florida—have proved to be valuable medicines.

"According to my observations the unpleasant effects of quinine, in producing ringing in the ears, &c., &c., are more constant and severe in proportion to the smallness of the dose employed. I have seen many patients excessively annoyed by doses of two grains, frequently repeated, who have afterwards, under similar circumstances, taken twenty grains with comparative impunity. The medicine, in solution, has also a greater tendency to produce these symptoms than in pilular form; still the solution is more immediate and efficient in its action.—*N. Y. Jour. Med.*

Uterine Hæmorrhage at the sixth month of Pregnancy—The "Plug" and bandage applied—The Ovum Expelled in two hours after.—March 14, 1839, half past 3 P.M., I was requested by a surgeon to visit Mrs. G——, pregnant of her seventh child, herself believing that she had arrived at the full term of her gestation. She had had trifling pains since half past 9, A.M.; the cause of the hæmorrhage unknown. On examination, judging from the form of the uterine neck, and the degree of elevation of the fundus of the uterus in the abdomen, I expressed my conviction, although assured to the contrary, that the patient had not completed the term of her pregnancy. From the softness of the presenting head, and it being only to be reached by the tip of the finger, the case had been mistaken, by a party previously consulted, for one of placenta prævia. The hæmorrhage continuing, and the orifice of the uterus being undilated, I introduced, by separate portions, a plug of soft sponge, until the vagina was

completely filled; a pad was applied to the vulva, to prevent the escape of the plug, and a double-T bandage to the abdomen. The hæmorrhage was thus completely arrested. At the end of two hours, brisk expulsive action being instituted, the plug was removed, and immediately a six month's fœtus was expelled, the placenta speedily following, without difficulty. The patient's recovery was progressive and perfect. *London Lancet.*

The action of Sulphuric Ether on an Enlarged Spleen.—Dr. Corrigan records, in the Dublin Hospital Gazette, a case of ague, in which quinine had been administered with the effect only of prolonging the intervals between the fits. Having given the patient a two drachm dose of ether, combined with twenty drops of laudanum, during the cold stage, the fits did not return; and the following observations of its influence on the spleen were made:

"The margin of the spleen was traced out several times before the measurement was finally taken, or the line of boundry of the organ marked on the surface. This being at length done, it was then found that the space of enlargement of the spleen during the rigor measured six inches in length, and seven inches and a half in breadth. The rigor being still on him he was given two drachms of ether and twenty drops of laudanum. Five minutes after, the rigor had quite disappeared, and the pulse had passed from 120 to 96; skin became warm; and the spleen is now only six inches and three-quarters by four and a half."

Hence Dr. Corrigan concludes—

"1. That the spleen can suddenly alter its volume.

"2. That other agents as well as quinine can effect this sudden alteration of size.

"3. A confirmation of old observation that a cure of the disease can be effected by other remedies as well as quinine."—*Ibid.*

Convulsions.—Recent evidence in children, shows that the ratio is in proportion to the standard of unhealthiness. Thus, on an average of the three years, 1838–'40, the proportion of deaths by convulsions and teething to the total deaths from *all* diseases was, in Birmingham 5·70 per cent., in London 7·30, in Leeds 12·20, in Manchester 13·70, and in Liverpool 15.—*Ibid.*

Cases of Labor in which the presentations are obscure.—At the commencement of my last letter I remarked, that the presentation of the fœtus in parturition may be ascertained, generally, very early in labor. The following cases may serve as illustrations of some of the difficulties which the practitioner may occasionally meet with:

I attended Mrs. G. in labor. The waters had already discharged themselves, and on examination the os uteri was found fully dilated, disclosing without question, a breech-presentation. As the pelvis was capacious, and the pains were effective, the labor was left to nature. After some hours of unlooked for delay, touching, occasionally, to note the progress of labor, I was not a little surprised to find a tongue protruding from what I had considered the distinctive mark of a breech presentation. This occurrence gave quite a *new face* to the affair. Nevertheless, in a short time the child was expelled by natural pains.

I had often repeated this anecdote to my familiar, professional friends, and many years afterward, my old and respected neighbor, Dr. H., called me to a very lingering case of *breech* presentation, in a young woman with narrow pelvis, in labor with her first child; and he jocularly said—"no mistake, there is no tongue here." It turned out, on examination, however, to be a *face* presentation—and the delivery of a dead child was effected after some difficulty, with the forceps. It seemed that my old friend, in his too eager search for a tongue, had converted the fœtus into a young Cyclops.

Dr. ——, sent for me after having been in attendance on a young woman, in labor with her first child 36 hours. He told me the waters were early discharged, the os uteri fully dilated, and the pains were regular, forcible, and strong. To my enquiry, "what is the presentation?" he frankly replied, he did not know. With something like a sneer, I expressed my surprise, as he had had much experience, and was a successful accoucheur. After a careful, close, and critical examination, I was constrained to make the "honorable amend," for I could learn no more than that the pelvis was filled with a globular tumor which obviously contained *bones*. Possessing ourselves of a patch of the external covering of the tumor, it proved to be scalp, and with a pocket knife instead of a trochar, we punctured the tumor, and drew off between two and three pounds of water. The tumor collapsed, and the fœtus was expelled by natural pains, presenting the remains of an enormous head, with shrunken and shrivelled members.

It is somewhat extraordinary that, excepting in one other

case of hydrocephalus—though I have known it done many times by my professional acquaintances, I have not found it necessary in 40 years, from malformation, distortion of the pelvis, or any other cause, to lessen the head.—*Buffalo Medical Journal.*

Needle found in the heart of a Cow. By J. H. Beech, M. D., of Gaines, N. Y.—*Dr. Flint:* Sir—Having recently become somewhat acquainted with you, through your excellent journal, I take the liberty of sending to you the following circumstances, thinking that the case may be rather interesting to yourself, if it be not worthy of any further notice; of this you must judge, and please use it as you think proper.

About four years ago, Mr. James Mather, of this village, requested me to examine the body of a cow which had just died, being in very good flesh. He had owned the cow about two years: she had been sick at short intervals during most of the time, and recently had appeared to be distressed for breath. I found in the pericardium two or three quarts of thinnish, purulent, *acrid* matter. In taking out the heart, my finger was pricked by what I found to be the point of a large darning needle. I think its track could be seen from the œsophagus; it seemed to have entered the right ventricle just below the middle, had passed directly through, and was fixed across the left ventricle about through the middle, with the point sticking out on the left side ¼ of an inch. There was slight hypertrophy of the walls of the ventricles; otherwise the organ appeared healthy. Some congestion existed in a small portion of the left lung. These were all the signs of disease which I saw; the weather was very cold, and I was unable to make as close an examination as I would have liked.

I have the needle now in my possession; it is very much rusted, but the eye is still entire.

This cow had been fed on "*slops*" by a former owner, but not while in Mr. M.'s possession. I think she must have got the needle in that way, and that it had been in the body for more than two years, and for a long time in the substance of the heart.—*Ibid.*

Iodide of Iron.—A writer in the Boston Medical and Surgical Journal, April 30th, 1845, recommends the following as an easy method of preparing a very perfect syrup of the Iodide of Iron:

"Take of Iodide 200 grains, iron wire half an ounce, white sugar in powder four ounces and a half, distilled water one fluid ounce. Agitate the iodide, wire, and water together briskly in a strong two ounce vial with a glass stopper, until the froth becomes white. Pour the fluid immediately into the sugar in a glass or wedgewood mortar. Triturate a few minutes, and then add distilled water enough to make six fluid ounces. Twelve minims of this syrup contain one grain of iodide of iron."

In the same communication the following simple method of preparing pills of the iodide of iron, as recommended by Dr. Christison, is quoted:

"Take of iodide 129 grains, iron wire about the thickness of a thin quill, half an ounce, distilled water 75 minims. Agitate them briskly together in a strong ounce vial, provided with a well-fitted glass stopper, until the froth becomes white, which will happen in less than ten minutes. Pour the liquid upon two drachms of finely powdered loaf sugar in a little mortar, and triturate immediately and briskly for a few minutes; add gradually a mixture of the following powders, viz: Liquorice powder half an ounce, powder of gum arabic a drachm and a half, and flour one drachm. Divide into 144 pills. Each pill contains about one grain of iodide of iron."

The iodide of iron is becoming a favorite remedy with the profession. The two constituents are adapted to meet indications which are often presented together, and each element seems to derive advantage from the combination. The tendency to decomposition, however, is a serious difficulty in the way of its administration in a simple state. The presence of saccharine matter is found to be necessary to prevent this difficulty, and the two recipes which are given above, while they serve this object, have the merit of simplicity.—*Ibid.*

Puberty in the African.—An important law question, says the New York Sun of Thursday last, came before the Court of Common Pleas of Franklin county Ohio, in the case of Joseph Williams, a colored boy under 14 years of age, charged with an attempt to outrage the person of Althear S. McDougal, a child of five years of age. The charge was proven. It was contended for the defence that the prisoner, or a boy under 14 years of age, could not be punished for this offence, according to the English decisions. The prosecution held that these were inapplicable to the present case, and medical

testimony was given to prove that persons of African descent arrive at the age of puberty earlier than Europeans. This decided the question, and the jury returned a verdict of guilty. He was sentenced to the Penitentiary for three years. His counsel intend to carry the case to the Supreme Court, says the same paper. It would be a matter of peculiar gratification here, to know the source of the medical testimony which so essentially influenced the court. If the discovery has actually been made that individuals of African descent sooner arrive at puberty than the descendants of other races of men, it is altogether a new fact in physiology—and the law of development was first promulgated, we believe, in the precincts of the Ohio tribunal. A physician is expected to state what he knows to be fact, and, if a court insists, he is justified also in advancing an opinion; but to stand up before a jury and positively declare that the descendants of Africans arrive at puberty earlier than the Caucasians or Mongolians, is assuming high ground, and what we think is not susceptible of proof.—*Boston Med. and Surg. Jour.*

Dropsical Affections successfully treatrd with Sugar.—We find in the Gazette Medicale (11th Oct., 1845,) the notice of a collection of cases recently published by M. Bagot, illustrating the beneficial effects of sugar in dropsical affections. It seems to have been first used by Dr. Garnier, who, towards the close of the last century, became affected in the French West Indies, with ascites, for which he was tapped three times, when, looking upon his case as hopeless, he indulged an inordinate propensity to eat sugar. Finding that it agreed with him, he soon made it his sole food, and, to his great astonishment, found his disease rapidly giving way. He was restored to perfect health, and the case published in Paris.

M. Bagot now reports about twenty cases, including almost every variety of dropsy, even one of ovarian encysted dropsy, in which sugar has been used advantageously. The brown sugar is thought preferable to the refined, and should be used almost to the exclusion of all other nourishment—the quantity being increased from a few ounces to a pound per day. The remedy is simple, and certainly worthy of trial.—*Southern Medical and Surgical Journal.*

Case of Lodgment and Retention of a Foreign Body in a Bronchus for the space of sixty years, with its final expulsion.

(Communicated by RODMAN BARTLETT, Student of Medicine, Salisbury, Conn.)—The following case being somewhat unique in its character, may, perhaps, be deemed of sufficient interest to find a place in your valuable journal. It occurred in the practice of my preceptor, Luther Ticknor, M. D., who is ready to vouch for the facts here stated:

Richard Moore, of Salisbury, Conn., now aged sixty-three years, inherited a good constitution, but when three years old, swallowed accidentally a piece of bone, which nearly suffocated him at the time, and which, from that day to the present, has produced a series of phenomena, which could only be accounted for, on the supposition that the bone was lodged in some portion of the bronchial tree. For a long time he was harassed night and day with cough, and severe dyspnœa, attended with a rattling, or sibilant rhoncus, fœtid breath, more or less pain deep in the right side, about opposite the fifth or sixth rib, and midway between the sternum and dorsal vertebræ. These symptoms continued to harass him until nearly the age of puberty, when other symptoms appeared, of a still more alarming nature. At this period, the cough began to be accompanied with expectoration of purulent matter, tinged with blood; attended also with marasmus or atrophy, and other symptoms of confirmed pulmonary disease. At the age of nineteen, he was suddenly attacked with hæmoptysis, which continued, at irregular intervals, for a series of years; during which time his general health and strength were greatly impaired, so that he was incapable of much exertion, being, indeed, confined to the house for more than eight years, About the age of twenty-eight, his general health began to mend; although still troubled with cough. For the next fifteen or twenty years, he was able to perform some labor, though not without considerable inconvenience from the symptoms above mentioned. In January, 1844, for the first time, since the third year of his age, the cough suddenly left him, and did not return for several months, when it again began suddenly to harass him as before. On the 8th of October, 1845, he experienced a remarkably uneasy sensation, of a pricking nature, deep in the right side, which excited violent coughing, and after one or two severe paroxysms, he experienced a sensation as if something had ruptured, or given way. This was instantly followed by the passage of something into the trachea, producing suffocation, which was forcibly ejected upon the floor, succeeded by the expectoration of purulent matter streaked with blood. On examination, the foreign body turned out to be a *bone*, nearly three fourths of

an inch in length, one fourth of an inch in breadth, and one twelfth in thickness, oblong and somewhat triangular in form, smooth and convex upon one surface, the other covered with sulci and protuberances. It appeared that the bone which he had originally swallowed, from the traditionary accounts preserved in the family, was a splinter from a rib from which he was sucking the meat, and it seemed highly probable, on examining the piece ejected, that this also was originally a portion of the same bone, as the spongy lamellæ were still visible on one side, while the smooth convex surface of the other was equally manifest. Now, then, are we not authorized in believing that this bone was lodged in one of the rami of the right bronchus for this long period of 60 years, producing the phenomena, which I have briefly described.—*New York Journal of Medicine, and the Collateral Sciences.*

Case of suspension of the mental faculties, of the powers of speech, and special senses, with the exception of sight and touch, occurring in a young woman, and continuing for many months, in consequence of her having accidentally fallen into a river, and being nearly drowned. By Robert Dunn, Esq., Surgeon.—Many and curious are the instances which have been recorded of the arrest, suspension, and, at the time, apparent obliteration of the most ordinary functions of the nervous system, in consequence of a sudden shock, agitation or fright.

Such cases are not more startling to the minds of common observers, than they are interesting to the physiologist and medical inquirer. The following plain narrative of an interesting case, which has come under my observation, may not be unworthy of the notice of my professional brethren. The subject of the narrative is a young woman, now in the nineteenth year of her age, of a mixed temperament, the *nervous* with the *lymphatic*, and, as the medical attendant of the family, I have had frequent opportunities of seeing her since she was two years old. She was the first child of her parents, and came prematurely into the world, about six weeks before the usual term of gestation. No reasonable hope was at first entertained that she could live. She had not strength to suck, but the milk, of which, fortunately, there was an ample supply, was drawn from the breast, and she was fed with it by a spoon, and from a nursing bottle. At the end of six weeks, the completion of the reputed time of gestation, she was in

convulsions for nearly an entire day, and all hope of her living was extinguished; but, nevertheless, she did survive, and from this time she began to thrive, to the great astonishment of every one who had seen her. She improved rapidly, and when, at four years old, she was inoculated for the small-pox, she was a fine, strong, and healthy child, stouter and larger than most children at her age. A custom prevailed in the village to which she was removed, and where, indeed, she had been born, that whenever the *small-pox broke out naturally*, as it was termed, among the inhabitants, the other children of the village should be *inoculated* if their parents or friends thought proper to have it done. At other times, inoculation was not permitted. She was, accordingly, inoculated, and had the small-pox so severely that it nearly cost her her life. She passed favorably through the other ordinary diseases of childhood, with the exceptiou of scarlatina, which she had in a severe form when she was ten years old. After the attack of scarlatina, she enjoyed uniformly good health, up to the date of the present narrative. and grew up a strong, robust, and hearty young woman. Her perceptive powers were naturally quick, and, being largely endowed with the imitative faculty, she was put to the business of a milliner and dress-maker. Two years ago, her health beginning to suffer from long and close application to business, she went, on my recommendation, to her grandfather's, in the county of Kent, and, while there, the following accident occurred:

On the 14th of July, 1843, as she was walking with her aunt, by the side of the river, which runs through the park of Sir Percival Dyke, of Lullington, she accidentally let a parcel which she was carrying slip from her hands, and in the effort to save it fell into the water. She laid hold of the grass upon the side of the bank, but this giving way, she again fell backwards into the water. Her aunt immediately ran for assistance, but on getting back nothing was to be seen, but, about twenty yards below the place where the accident had happened, a part of the girl's shawl was observed to be floating upon the surface of the water; and from this place she was eventually dragged, in about a quarter of an hour from the time of her falling in, in a state of suspended animation. She was carried to the house of Sir Percival Dyke, where she received every attention. A medical man was sent for, and after the lapse of about six hours, she became sensible, and so far recovered as to be well enough to be removed, on the afternoon of the following day, to her grandfather's house at Shoreham. Though she was now sufficiently recovered to give some ac-

count of the accident, and of the state of her feelings after falling in, on her first attempt to get out, she was far from well, complaining of great uneasiness about the bowels, and of pain in the head. The bowels were obstinately constipated; there was no evacuation, from the day of the accident until the 20th of the month, a period of seven days; and when the constipation gave way, the alvine dejections proved that both mud aud gravel had passed into the stomach. On the 24th, she was seized with a fit (up to this time she had been quite sensible,) and is described as lying in the fit in a state of complete stupor for nearly four hours, when she opened her eyes, but was deprived of the powers of speech and hearing, and of the senses of taste and smell; her mental faculties quite benumbed or paralyzed, giving no indication that she recognized any of her friends about her. The head was shaved, and covered with ice; a blister applied to the nape of the neck, and other remedial measures adopted. I regret that I cannot furnish more precise information as to the nature of the fit, and of the treatment pursued. I have written twice to Mr. Richards, on the subject, but have not been favored with any reply to my notes.

After the lapse, however, of about three weeks, she was so far recovered as to be able to be removed to London; and I saw her, for the first time after the accident, at her own home, on the 8th of August. She did not, or rather could not, recognize me, for her physical faculties were quite suspended; indeed, her only medium of communication, at this time, with the external world was through the senses of *sight* and *touch*, for she could neither *hear nor speak, smell nor taste.* Her vision, at short distances, was quick, and so great was the state of exaltation of the general sensibility upon the surface of the body, that the slightest touch would startle her; still, unless she was touched, or an object and person was so placed that she could not avoid seeing the one or the other, she appeared to be quite lost to everything that was passing around her. She had no notion that she was at home, nor the least knowledge of anything about her; she did not even know her own mother, who attended upon her with the most unwearied assiduity and kindness. Her memory, and the power of associating ideas, were quite gone. Wherever she was placed, there she remained throughout the day. She was very weak, but her bodily health was not much deranged; the tongue was clean; the skin moist; and the pulse quiet and regular; but the bowels sluggish. At the time of the last menstrual period there had been considerable general irrita-

bility, attended with some febrile disturbance, and with an increase of heat about the head, and these symptoms I noticed on subsequent occasions. The catamenia had followed immediately upon the accident; it re-appeared at the proper time, and continued regular and copious throughout her illness. Her appetite was good, but having neither taste or smell, she ate alike indifferently whatever she was fed with, and took nauseous medicines as readily as delicious viands. She required to be fed; when I first saw her, she had no notion of taking food that was placed before her, but, a few days afterwards, if a spoon was put into her hands, and filled by her mother, and conveyed for a few times to her mouth, she would afterwards go on by herself until the whole was eaten.

Her wants were sedulously attended to, but she manifested no uneasiness as to food, however long she might be kept without it. The same thing was observed in reference to drink. The calls of nature were alike unheeded by her; the urine and fæces were voided *unconsciously*, but with the striking peculiarity, that, during the expulsion of fæces, such was the *reflex action* induced that the extremities became spasmodically convulsed and rigid; the head was thrown backwards; the muscles of the neck were stiff; and the eyelids closed; so that her mother considered that her bowels never acted without her having what she called "a convulsion fit;" the same thing occasionally happened when the bladder expelled its contents, and what is still more remarkable, the same tonic rigidity of the muscles invariably took place whenever she went to sleep. Every night when she was placed upon the bed, she remained for some time in a semi-recumbent posture, after which the eyelids closed and the head fell backwards upon the pillow; the hands were clenched; the muscles of the neck stiff; the arms and legs in a state of tonic rigidity, the latter always crossed the one upon the other; after a time, the muscles became relaxed; she turned upon her side, and slept soundly until the morning.

Such was the state in which I found the young woman on her arrival in London, nearly one month after the occurrence of the accident, and I may here anticipate the narrative by stating that from the time her mental faculties became suspended, in the fit on the 24th of July, 1843, until the July of the following year, when they were again restored—her life, to herself, is *one continued blank*. She has not the slightest knowledge or remembrance of anything which took place during the interval. I put her at once upon a course of tonic medicine, giving her of the compound mixture of iron ℥iss.

three times a day, and a frequent aperient of the aloes and myrrh-pill, adding, occasionally, a few grains of blue pill.

One of her first acts on recovering from the fit had been to busy herself in picking the bed-clothes, and, as soon as she was able to sit up and to be dressed, she continued the habit by incessantly picking some portion of her dress; she seemed to want an occupation for her fingers, and, accordingly, part of an old straw bonnet was given to her, which she pulled to pieces of great minuteness; she was afterwards bountifully supplied with roses; she picked off the leaves, and then tore them into the smallest particles imaginable. A few days subsequent she began forming upon the table, out of these minute particles, rude figures of roses and other common garden flowers; she had never received any instruction in drawing.

Roses not being so plentiful in London, waste paper and a pair of scissors were put into her hands, and for some days she found an occupation in cutting the paper into shreds; after a time these cuttings assumed rude figures and shapes, and more particularly the shapes made use of in patch-work. At length she was supplied with the proper materials for patch-work, and, after some initiatory instruction, she took to her needle, and in good earnest to this employment. She now labored incessantly at patch-work from morning till night, and on Sundays and week-days, for she knew no difference of days nor could she be made to comprehend the difference. She had no remembrance from day to day of what she had been doing on the previous day, and so every morning commenced *de novo*. Whatever she began, that she continued to work at while daylight lasted, manifesting no uneasiness for anything to eat or to drink, taking not the slightest heed of anything which was going on around her, but intent only on her patch-work. Occasionally, indeed, and not unfrequently two or three times in the course of the day, she would have what her mother called her "fits." Whilst intent upon her work, and without any external exciting cause, her head would fall backwards, her eyelids close, her arms and legs become rigid, and her hands clenched. After a short time, varying in extent from a few minutes to half an hour or more, the muscles would become relaxed, the eyes open, and she would resume her work, apparently unconscious that anything had happened. About this time she began to show indications of feeling interested in the figures of the flowers and buds, &c., upon the silk and other materials which are made use of in patch-work. The perception of colors, and the exercise of the imitative faculty, were the first evidences she exhibited of physical ad-

vancement in her present state. Although she had received a good plain education, and had been very fond of books, now she could neither read nor write, nor even be made to comprehend the letters of the alphabet. All her former knowledge and past experience appeared to be obliterated, or at least, for the time, to be buried in oblivion, with one exception—a feeling of dread or fright in connection with water; and she now began, *de novo*, like a child, to acquire ideas and to register experience. Admitting that the senses are the only inlets of all the materials of knowledge, and that—"Nihil est in intellectu quod non prius fuerit in sensu," it was not to be expected when in this abnormal condition, with only the senses of sight and touch in communion with the external world, that her progress could be otherwise than slow in the extreme. However, she evinced an interest in looking at pictures and prints—more especially of flowers, trees, and animals—but when shown a landscape in which there was a river, or the view of a troubled sea, she became instantly excited and violently agitated, and one of her fits of spasmodic rigidity and insensibility immediately followed. If the picture were removed before the paroxysm had subsided, she manifested no recollection of what had taken place, but so great was the feeling of dread or of fright associated with water that the sight of it in motion, its mere running from one vessel to another, made her shudder and tremble, and in the act of washing her hands they were merely placed in the water. After she had been at home a fortnight, I had the benefit of frequent consultations with my friend, Dr. Todd, of King's College, on her case. She had partially recovered her taste, and refused any longer to take nauseous medicines. Dr. Todd expressed his conviction that eventually she would perfectly recover, however gradual and protracted the recovery might be—an opinion which has been fully verified. The accident happened in 1843, and it is only within the last few weeks that she has completely regained her hearing, and the full exercise and enjoyment of her mental and bodily powers. We agreed that the tonic course of medicines should be continued, combining quinine with the iron. We further advised the frequent sponging of the head and spine with cold water, and the use of the shower-bath, as soon as it could be borne. The first attempt, in accordance with onr wishes, of running water through a common cullender upon her head, induced such alarming excitement and fright, and was followed by a fit of insensibility of such long continuance, that the experiment was not repeated.—*London Lancet*,

Poisoning by Urine. By G. F. Collier, Esq., M. D.—I present to the public through the medium of "The Lancet," the following curious and instructive case. It abounds with matter for reflection, and it is especially worthy the consideration of those chemical physicians of the present time who are enthusiastically sanguine in their expectations of discovering the "fons et origo mali," and, by consequence, the curative or palliative indications, by reference to a patients secretions; and who confidently pronounce on the abnormal wear and tear of a man's cerebrum, by noting the morbid excess of phosphorus (a cerebral element) in his urine.

The case becomes additionally interesting, and, as I think, valuable, by the circumstance of its having been tested by the lapse of eight years. I shall offer no theories, no conjectures, I think it speaks for itself.

December 13th, 1838.—Thomas P——, of Turnham green, aged thirty-four, a day-laborer working on the roads, presented himself for advice, having for some days been afflicted with a dropsy. His face is very much swollen; and the anasarca generally more prominent in the upper, than in the lower, parts of the body. He says, that until now he scarcely knows what it is to be ill; that at, and since, the fall of the leaf he has had a troublesome eruption to which he had been many years occasionally subject; as it lasted longer than usual, he was advised by an old woman to drink his own urine for nine days, taking early in the morning, on a fasting stomach, precisely the whole quantity voided on going to bed; says he got through the nine doses, but thinks he began to swell before he had finished the course; he has fluid in the abdomen, and the parietes of chest and belly, swelling, however, greatest in the upper parts; the urine is scanty, thick, deep brown, and very offensive; he has a heaviness of the head, increased on stooping, and his own words are, that he feels too heavy for work, having neither his usual warmth nor life in him; he has little thirst; his pulse is under 90; his countenance pale, and its expression heavy and vague; he walks with a stick because, he says, he feels the want of support; he has not been unusually exposed to cold or to wet, and is of temperate habits; the urine is not albuminous; he loses his breath if he walks quick, and is obliged to stop. Deeming this case to be due to the poisonous impression, or to the ingestion of the urine by endosmosis into the circulation, I ordered a smart purgative of calomel and colocynth, and ofterwards six pills of calomel, squill, and digitalis, with heath-broom tea. The water was all dispersed, and the man back to his work within ten days;

he required no repetition of the medicine; the urine did not pass as it was used to do before this illness, till the ninth day.—*Ibid.*

French Medical Congress.—An association of medical men, numbering now upwards of four thousand, has recently been formed in France, with a view of aiding and accelerating measures of medical reform, promised sometime since by the government. Early in November, the members of this association assembled in Paris, under the title of a 'Medical Congress,' and we are happy to learn that its meetings have been characterized by great zeal and intelligence, and have received all due countenance from the government itself—notwithstanding the jealousy with which it looks upon every popular combination having for its aim any reform of existing abuses, or rather interference with regular legislative action. M. Serres was President. Committees were appointed and reported on the topics of medical legislation, education and government; and resolutions have been adopted by the Congress, to be submitted to the Minister of Public Instruction, which embraces the views of that body on the entire subject of medical government.

The Committee appointed to examine the question of freedom of medical instruction, terminates with the following recommendations:

1st. Every member of the medical profession in France, should enjoy the right of teaching the medico-chirurgical sciences.

2d. In order that the freedom of medical teaching shall be as extended as possible, government should, in Paris and the principal towns of France, place a suitable locality, and all the material appliances necessary for practical teaching, at the disposal of every member of the medical profession.

3d. Private teaching should in no way infringe on the official education in the faculties and colleges, and should therefore confer no scholastic privilege, but merely aid in diffusing knowledge.

The first question discussed (relating to the exercise of the medical profession) was that of the existence of two orders of medical practitioners. The expediency of having an inferior grade of practitioners was denied, and the institution of officers of health was declared illegitimate and dangerous. This opinion was clearly announced in the following resolu-

tion, which was carried unanimously: That it is to be hoped, that in any future medical law one class of medical practitioners only will be recognized, that of doctors in medicine. That should such a decision be come to, existing officers of health might be allowed, during five years, to offer themselves as candidates for the M.D. degree at any of the faculties.

It was also decided at the same time, that the institution of district medical officers, to take care of the poor, was not necessary, and would be an attack on the liberty of the medical body. (This decision of the congress was arrived at in opposition to the wishes generally expressed in the documents received from the provinces.)—*Bulletin Med. Sci.*

M. Serres' Address on opening the Medical Congress of Paris.—The deliberations of the congress were opened by a short, but most energetic address from M. Serres, the president, of which the following is a summary:

"Gentlemen, and dear colleagues,—Social epochs present characters which distinguish them, and stamp their impress upon them. The ruling character of the nineteenth century is, the tendency to perfecting the physical and moral welfare of man. Sciences, arts, private and general industry, every thing tends towards this end; every one is carried along by this general movement, men as well as governments. Among human sciences, there is one which, for the last three thousand years, investigates the wants of humanity, and ever meditates upon them. To this science humanity owes, in a great measure, the physical welfare which it now enjoys. This science is medicine, the dominion of which embraces surgery, pharmacy, and the veterinary art. Thus it is that the medical family folds, as it were, within its arms, society in general. It ploughs the waves with our vessels. It accompanies our soldiers in the camp, and on the field of battle. It watches at the domestic fireside, in hospitals, and in prisons. Human vicissitudes meet it nearly everywhere, and everywhere they find it prepared to make the greatest sacrifice. The more important, the more indispensable, the services which the medical body renders to society, the more attentive a government should be to the institutions which regulate it. Thence the anxiety of our government to improve the laws which govern medical institutions. It is our duty to acquire as much information as possible, in order that we may be of the greatest possible utility to our fellow-creatures. It is the duty of

government to protect us in the application of the knowledge we have thus acquired, and to see that all the members of the social body benefit by it. One of our great men has said, 'I know nothing in the world more contemptible than a cowardly soldier, or than an ignorant medical man; the first is contemptible, because he compromises the fate of his country in the day of danger; the second, because he compromises, hourly, the life and welfare of his fellow-creatures.' Thanks be to heaven, there is not a cowardly soldier in France, and government is under the obligation to society to employ all its power to render it *impossible* that there should be such a person as an ignorant medical practitioner.—*London Lancet.*

Effects of Lightning.—Our readers will doubtless recollect a remarkable paper, published in a former number of our Journal, entitled "extraordinary effects of a stroke of lightning," by John LeConte, M. D., of Savannah, Georgia. In a recent letter from the distinguished writer, we have the following additional particulars, in relation to some of the cases there mentioned:—

"SAVANNAH, Dec. 4th, 1845.

"DR. LEE: My Dear Sir,—Thinking that you might be interested in hearing something further concerning the history of the cases which formed the subject of my paper on the 'effects of lightning,' which was honored with a place in the 'New York Journal of Medicine, and the Collateral Sciences,' for Nov., 1844; I have concluded to avail myself of the privileges of a correspondent.

"You will recollect that only two out of the five negroes who were struck down, survived the shock, viz. cases four and five. Charlotte (case 4), up to the time she was struck by the lightning, had never been pregnant, although she was then past 29 years of age. The electricity seems to have produced a remarkable impression upon her uterine functions, causing a manifest derangement of the catamenial flux, as already noticed in my previous details of the case. During the early part of the last summer, she became pregnant for the first time in her life, and will shortly be confined!! She has been married about ten years. It is impossible to determine whether the establishment of the reproductive functions in this case, is in any manner connected with the powerful shock sustained by her nervous system; but, perhaps, the fact is not unworthy of note, when taken in connection with the extraor-

dinary impression which was made upon the uterine functions in both of the survivors.

"Sarah (case 5), the woman past 70 years of age, in whom menstruation was re-established after twenty years' cessasion, still continues to menstruate with perfect regularity up to the present time, more than two years and five months since she was struck by lightning!! Her health still continues very good.—*N. Y. Jour. of Med.*

Turpentine in Large Doses in the Treatment of Purpura Hæmorrhagica. By J. Moore Neligan, M. D., M. R. I. A.—It is now very generally admitted that there is not the least similarity, either in their nature or origin, between purpura hæmorrhagica and the scurvy of seamen. Nevertheless, this idea, the correctness of which was so strongly insisted on by Willan, still influences much the opinions of many practitioners, with reference to the treatment of this disease; and the statement put forward by our great English authority on skin diseases, "that the treatment of this disease is simple, and may be comprised in a very few words: a generous diet, the use of wine, Peruvian bark, and acids," is, even in the present day, too indiscriminately adopted. On the other hand, we find it laid down by numerous writers on the disease, who adopt the opinion of Dr. Parry, *that it is always of inflammatory origin*, that early and free venesection alone holds out any hope of successful treatment. My intention in the present communication is, without attempting to reconcile or account for these conflicting opinions, to narrate some cases of purpura which were speedily and effectually cured by the administration of turpentine in *large doses*, and at the same time to state the reasons which first led me to employ it.

In the ninth volume of the "Edinburgh Medical and Surgical Journal," Dr. Harty, of this city, in a communication to Dr. Bateman, of London, details some cases of purpura simplex, and of purpura hæmorrhagica, in which the free employment of purgatives was attended with marked and rapid success. The purgatives employed by him were calomel and jalap; and he states that he was induced to adopt this mode of treatment of purpura from incidental remarks of the good effects of purgatives in his disease, to be met with in the writings of Heberden, Hoffman and others. In the spring of 1840, while acting for a few months as one of the physicians of the city of Cork Dispensary, I met with eight cases of

purpura hæmorrhagica of the worst form. The district which I had the charge of (Blarney-lane and its neighborhood) being one of the poorest in the city, the individuals who were attacked with the disease were nearly all of broken-down constitution; owing to outwork and insufficient nutriment. Having, in consequence of the asthentic character of the disease, treated the first two cases which came under my care, on the tonic plan, without success; in the next case I met with I had recourse to the employment of free purgation, but the case, which, however, was not seen until the disease was very far advanced, also terminated fatally. The fourth case, in which the individual was younger and of a more robust habit of body, terminated favorably under the free use of purgatives, employed as directed by Dr. Harty.

From the result of these four cases I was, of course, led to place but little reliance on the use of bark and acids in the treatment of this disease, and to look more favorably upon the employment of purgatives. I thought, however, that still more favorable results might be expected from the administration of the oil of turpentine, which, while it acts as a powerful cathartic, also possesses the property of checking hæmorrhage, depending on an atonic state of the smaller blood-vessels, owing, probably, to its powers as a diffusible stimulant. In consequence of those views, I employed this remedy in the four cases that afterwards came under my care while in charge of the district, and they all recovered. I prescribed the oil both in the form of draught and of enema; the usual dose for adults being from one ounce to an ounce and a half, and for children from two drachms to half an ounce, generally in combination with castor oil, to render its cathartic action more certain.

Since that time I have employed oil of turpentine in every case of purpura which has been under my care, and its use has been invariably attended with beneficial results. The mode of its administration, and the effects which it produces, will be better understood from a perusal of the following cases, the two first of which I have selected as being evidences of the effects of the remedy, both in the child and in the adult, and also as having been witnessed by the clinical class in the hospital; and the third, in consequence of its having been attended, in consultation, with an intelligent practitioner of this city, who was at first adverse to the use of the oil of turpentine in such large doses.

Case I. Reported by Dr. J. O. Curran.—*Sore Throat, Anorexia, and general Depression of a Patient exposed to Conta-*

gion of Scarlatina; Occurrence of Purpura Hæmorrhagica four days after; Turpentine per Os et Anum in large doses; rapid and uniform recovery.—Anna Welby, a remarkably fine-looking child, six years of age, was admitted into Jervis-street Hospital on the 11th of April, 1843. She is robust, but very pale, and her countenance has a most languid and anxious expression; the lips and nostrils are covered with blood of a dark color, which has coagulated over them, and blood is oozing slowly from the margins of the gums; an eruption of small circular spots, about two lines in diameter, and varying in color from a blackish purple to the hue of arterial blood. is thinly and pretty uniformly diffused over the whole body; the spots are nearly all of the same size, and perfectly circular, but a few closely resemble vibices both in color and outline; the color of the eruption is not in the least affected by pressure, nor by the part of the body in which it occurs; a few spots are sensibly prominent, and there are also some which are mere bloody vesicles, and which rupture under slight pressure with the nail; one or two spots are situated on the red margin of the lips, as well as on the mucous membrane of the mouth; the tongue is moist and slightly furred, and the papillæ, which are red and prominent, give it a mottled appearance; the fauces are very red, and the right tonsil considerably enlarged, puckered, and of a deep brownish-red color; the pulse 120, small and hard; the respiration quiet, and there is no cough or expectoration.

The history of the case is shortly as follows:—patient slept in the bed with her brother and sister, who had just been attacked with scarlatina. On Thursday (the 6th) she was observed to change color several times, she abandoned play, and could not be induced to eat anything. The following day she complained of her throat being very sore, and her mother observed that it was swollen; sickness was also complained of. The next day there was no alteration. On Sunday morning the eruption was first perceived; her gums were then bleeding, and in the course of the day she passed blood by urine, by stool, and also by vomiting; she had also several attacks of epistaxis, which, however, were very slight, and subsided spontaneously; on the next evening she was admitted in the hospital.

April 12th. Was very restless during the night, and could not be induced either to eat or drink anything; slept little; this morning her countenance has the same appearance of languor, there is more depression, but the pulse, &c., continue as before; the patient will not answer questions, nor even

open her mouth, or put out her tongue when desired to do so.

Many new spots have made their appearance; they are of a florid-red color, whilst the hue of those previously noticed has become darker; no new vibices have been observed, and there has been no epistaxis since her admission; blood oozes from the gums, and occasionally from the nares, which the patient is continually irritating with her fingers; the urine is said to have been of a porter color, but it was not preserved; the bowels have not acted since her admission. ℞. Olei terebinthinæ, olei ricini, utriusque, ʒiii, Aquæ menthæ piperitæ ℥ss. Misce, Fiat haustus statim sumendus, et vespere, ni alvus prius responderit, repetatur.

April 13*th.* The above draught was given twice, but it speedily excited vomiting; the whole of the medicine, however, did not appear to have been ejected from the stomach; it had no action whatever on the bowels, and consequently five grains of calomel, with an equal quantity of scammony, were administered at bed-time, by the directions of the house-surgeon.

The eruption is unchanged; the skin is hot; the pulse hard, and ranging about 130; the tongue has lost the mottled appearance which it presented on the day of admission, but it is still slightly furred; the fauces are red, but the swelling of the right tonsil is diminished.

The bowels have not been moved; there is no pain complained of, the respiration is but very slightly accelerated, and there is no cough whatever. ℞. Olei terebinthinæ, olei ricini, *aa* ℥ss, decocti hordei, ℥x, Fiat enema, statim adhibeatur.

April 14*th.* The injection operated freely, bringing away a considerable quantity of feculent matter, intimately mixed up with grumous blood.

The improvement in the appearance of the patient is of the most marked and decided character. The countenance has partially regained its color and animation, and the patient is sitting up in bed, amusing herself, and readily answering questions. The pulse is less frequent and not so hard; the tongue quite clean and moist; the skin cool. No new spots have made their appearance, and those which were previously present have become much darker-colored. ℞. Olei terebinthinæ, olei ricini, *aa* ʒii. decocti hordei, ℥x, Fiat enema, hodie injiciendum.

April 15*th.* Continues to improve. The enema to be repeated.

April 16*th.* Dejections still consist almost wholly of grumous blood, but mixed with a much larger and very evident

proportion of feculent matter. Pulse 120; respirations 24; skin of natural temperature; eruption much faded; expression of countenance cheerful and healthy. The enema to be repeated.

April 17th. Had two perfectly natural dejections after the enema; feels and looks quite well: spots very much faded.

April 20th. Countenance quite healthy and lively; eruption scarcely perceptible. The bowels being confined, she was ordered a mild purgative of calomel and scammony.

April 24th. Discharged cured.

This child was admitted into hospital again on the 2d of January, 1845, nearly two years afterwards, laboring under a second attack of purpura, not nearly so severe, however, as in the first instance. The oil of turpentine was administered to her in the form of draught, uncombined with castor oil, the quantity prescribed being two drachms, night and morning, for five successive days; it was given floating on the surface of peppermint water, in which form it was retained by the stomach, and produced from three to four stools daily. She was quite well on the 7th instant, the sixth day after the appearance of the spots, but she was kept in the hospital until the 12th of January, for fear of a relapse.

Case II. *Purpura Hæmorrhagica, occurring in an adult, cured by large doses of Oil of Turpentine.* Reported by Mr. Farmer.—William Flannagan, aged 50, a laborer, admitted into Jervis-st. Hospital, July 1, 1845. The entire surface of the body and limbs is covered with small circular spots, of various size and color; from half a line to a line in diameter, and varying in color from the florid red of arterial blood to a purplish-black hue. There are also several large, ecchymosed patches of a deep greenish-purple color; those are situated chiefly on the right mamma, the elbows, the loins, and the backs of both legs. Firm pressure produces no effect on either the small or large spots. He complains very much of weakness, with pain in his back, which, together with a feeling of great lassitude, has, from the commencement of his illness, altogether prevented him from working. He is constantly coughing up a frothy serum, deeply tinged with blood; the gums also bled slightly, and he states that, previous to his admission into the hospital, he passed bloody stools. The pulse beats about 60 in the minute, but is feeble and very compressible. The body is emaciated, and the countenance very expressive of anxiety.

In early life the patient was addicted to intemperance, nevertheless he enjoyed perfect health until the first attack of the

present disease, which was about six months ago. Since that time he has been repeatedly attacked with the disease, but at no time so severely as at the present. He was in a hospital during the first seizure, where he was cured of it, but it reappeared in three months afterwards; he was again admitted into the same hospital, but having been discharged before the spots completely disappeared, they in a few days began to increase in size and in number, and he has never been free from them since. The great size of the vibices, together with the bloody dejections and sputa, and the complete prostration both of mind and body, compelled him at length to seek admission into this hospital.

July 2d. Many new spots have made their appearance since yesterday, and the bowels have not been moved since his admission. ℞. Olei terebinthinæ ℥iss, surupi ℥ii, aquæ menthæ piperitæ ℥ii, Misce, Fiat haustus statim sumendus.

July 3d. Was somewhat intoxicated yesterday after taking the draught, which vomited and purged him freely, the stools being slightly mixed with grumous blood. He feels much better to-day, and eats with an appetite, which he has not done for some time. The spots are darker colored than on admission, and some new ones have made their appearance, but the sputa are not so bloody.

July 4th. The large blotches are faded, and turning of a yellowish-green color, while the small spots are disappearing; sputa still tinged with blood; bowels not moved yesterday. ℞. Olei terebinthinæ ℥iss, olei lini ℥i, decocti hordei ℥xvi. Fiat enema, et statim adhibeatur.

July 5th. The patient is improved in every respect, with the exception of the sputa, which are more bloody; the bowels were affected only once by the enema; there is no appearance of blood in what he passed. ℞. Olei terebinthinæ ℥i, syrupi ℥ss, aquæ menthæ piperitæ ℥ii, Misce: Fiat haustus, statim sumendus.

July 7th. Still improving; both large and small spots are gradually disappearing; bowels rather confined. The draught to be repeated, and to have full diet.

July 9th. Feels quite well to-day; none of the small spots to be seen, and the larger blotches much diminished in size; has had no expectoration for the last two days; as the bowels were confined, he was ordered the common castor oil draught.

July 12th. Flannagan was discharged to-day quite cured, having been kept in hospital until all the stains disappeared from the skin.

The third case was that of a delicate child, five years of

age, whom I attended in consultation with my friend, Mr. Dobbyn, of D'Olier street, in May, 1843. After two days' slight fever, the entire body became, in one night, thickly covered with spots of purpura, while two large vibices were apparent on the nates, evidently produced by the pressure of the body on that part; the bowels were free, but the stools consisted of feculent matter, intimately mixed with blood. The oil of turpentine was administered to her in the form of draught, in doses of two drachms and a half twice daily. She was only five days confined to bed, and on the sixth day scarcely a trace of the disease could be perceived on any part of the body.

This case I look on as being particularly interesting, when considered in connexion with that of Welby, the first case I have related in this communication, inasmuch as this was an exceedingly delicate child, of a rather strumous habit of body, while the girl Welby was a fine, healthy-looking child, with, after her recovery, a very florid complexion. It thus appears, that this mode of treating the disease is equally applicable when it occurs in the robust as in the debilitated—a fact which is fully born out by the experience I have had of it for the last five years.—*Lond. and Ed. Monthly Journal.*

Hereditary Predisposition.—There is no subject connected with medicine which would more amply repay a scientific investigation than this. The facts are numerous, and can be arranged on an irrefragible general principle, namely: that every portion of the body of the offspring participates more or less in the physiological conditions of the parents. The first step in the inquiry would be, to ascertain the physiological laws of hereditary transmission. The true direction in which to seek this is in embryology, and particularly in the development of tissues. Dr. Siebert remarks, to illustrate our views, that the gout of the parents may appear in the offspring as stone, or disease of the heart. This we know to be true, and the explanation, we conceive, is, that the serous layer of embryo has received the hereditary predisposition of the parent. This predisposition is shown in a tendency to disease of the embryonic products of the serous layer, namely, the proper serous membranes and the bones and muscles with their appendages, namely, sero-synovial sacs, tendons, cartilages, &c. With this predisposition a mordid action in and a metamorphosis of the serous tissues is

more frequent. Thus, in persons of this constitution, the muscular and tendinous fibres, and the cartilages, will change into bone—the serous membranes into cartilage—while the sub-serous membranes of the hollow muscles become the nidus of ossific deposits. Dr. Siebert remarks that gonorrheal fathers have scrofulous rachitic children. In this example, the mucous layer of the embryo and the mucous surfaces and tissues derived therefrom have the morbid predisposition of which the gonorrhea and the scrofula are special manifestations.

Special organs suffer also hereditarily, just as minute personal traits are transmitted to offspring. M. Boucher inquired into the fate of 58 individuals, the offspring of 14 epileptic females. Of these 32 died of convulsions in infancy, and of the 26 remaining, 7 had different nervous affections, 2 convulsions of an intermittent type, 2 were epileptics, and 1 hysterical; so that 14 only of 26 who grew up, remained free from disease of the nervous system. As we shall revert to this important question elsewhere, nothing more need here be said, except that Dr. Siebert's discussion of the subject is superficial and contains nothing novel.—*Brit. & For. Med. Rev.—Bul. Med. Sci.*

Confident Expectation in the Cure of Disease.—Dr. Paris mentions a curious example of the salutary effect of confident expectations in the relief of disease. When the powers of the nitrous oxide were discovered, Dr. Beddoes at once concluded that it must be a specific for paralysis: a patient was selected for the trial, and the management was entrusted to (Sir Humphry) Davy. Previous to the administration of the gas, the young chemist inserted a small pocket thermometer under the tongue of the patient, as he was accustomed to do upon such occasions, to ascertain the degree of animal temperature, with a view to future comparison. The paralytic man, wholly ignorant of the nature of the process to which he was to submit, but deeply impressed, from the representations of Dr. Beddoes, with the certainty of its success, no sooner felt the thermometer under his tongue, than he concluded the *talisman* was in full operation, and in a burst of enthusiasm declared that he already experienced the effect of its benign influence throughout his whole body: the opportunity was too tempting to be lost; Davy cast an intelligent look at Mr. Coleridge, and desired his patient to renew

his visit on the following day, when the same ceremony was performed, and repeated every succeeding day for a fortnight, the patient gradually improving during that period, when he was dismissed as cured, no other application having been used.—*Med. Chir. Rev.—Ibid.*

On the Use of Electricity in Exciting Uterine Action during Delivery.—I was requested to see Mary Cook, æt. 39 years, in her sixteenth confinement, on Friday morning the 16th of June.

On my arrival at the house, I learned that her previous labors had been tolerably good, with two or three exceptions, when they had been considerably protracted for want of pains. Her health has always been delicate, and for the last few weeks she has had a troublesome cough, attended with copious expectoration; emaciation and occasional night-sweats —symptoms which naturally led to the opinion that she was suffering from phthisis, although subsequently this diagnosis was not confirmed by a physical examination of the chest. On the Sunday evening prior to my visiting her, she was first attacked with premonitory labor, soon succeeded by regular and frequent pains, which, on the following morning, abated, but never entirely left her till Wednesday night when the liquor amnii was discharged.

At 1 A.M. on the Friday, the pains returned with considerable vigor, but did not last above an hour, and at 6 o'clock were again renewed for a short time. It was about four hours after this period that I found Mr. T. with the patient, to whom he had given a dose of the tincture of ergot, and also some spirit and water; but these measures were followed by only a few slight and ineffectual pains.

On making an examination, I found the vagina freely lubricated, the os uteri dilated, the head of the child small, presenting in the right oblique diameter, and in the pelvic cavity; in fact, there appeared no obstacle whatever to the completion of the case but uterine inertia, which I considered was owing to constitutional debility, arising chiefly from the state of the chest. She had rather an anxious countenance, a small and frequent pulse; complained of great thirst and languor, and of having had no sleep for several nights.

It was obvious that if uterine contraction could not be somehow induced, and it must be remembered that the ergot had been already tried, the alternative would be instrumental

delivery; and this, considering the weak state of the patient's health, and the most improbable and unpleasant result of hemorrhage from atony of the womb was not desirable.

At the suggestion of Dr. Lever, who kindly lent me his electro-galvanic apparatus, I resolved on a fair trial of galvanism, and accordingly, with my friend, Mr. Richardson, proceeded to its application externally and obliquely across the anterior surface of the uterus. In a few minutes the effect was apparent. Regular, strong, frequent pains came on, and in a quarter of an hour from the first application of the remedy, a living male child and placenta was expelled, attended with the least degree of hemorrhage I ever witnessed.

The uterus was immediately firmly and permanently contracted, and, with the exception of slight soreness of the abdomen, the patient expresses herself as quite comfortable, and, up to the present time, setting aside debility, she has progressed favorably.—*Med, Gaz.—Ibid.*

Rapid Death from Oxalic Acid.—Dr. Ogilvy, of Coventry, has communicated to the Lancet a case of poisoning by oxalic acid, in which it is probable that death took place within *three minutes* after the poison had been swallowed. The sister of the deceased had been absent from the room about that period, and on her return found her dying. The quantity of poison taken could not be determined. The only other remarkable circumstance in the case was, that the coats of the stomach were so softened, that on an attempt being made to remove the organ, they were lacerated by the weight of the contents. This was probably a chemical action post-mortem. The intestines and left lobe of the liver were also found softened, as if by transudation. We believe this to be the most rapidly fatal case on record.—*N. Y. Jour. of Med.*

The Late Dr. James Johnson.—It would be treason to the Literature of Medicine, and a wrong to the memory of an able physician, to suffer the death of Dr. James Johnson to pass without some notice. If the pursuit of knowledge under difficulties is honorable—if its attainment by incessant industry is laudable—if the example of a man rising without friends, or family, or wealth, to a high place in his profession, and to general estimation with the public, is calculated to be useful

to those whose career is yet to be run—then a sketch of the life of Dr. James Johnson will not be without its value. We regret that our space is too limited to admit of such ample details as we could wish; but that regret is diminished by the conviction that the present editors of the "Medico-Chirurgical Review" will supply our deficiencies.

James Johnson, or, rather, Johnston, for such was really his name, was the youngest son of a family of Scotch extraction, settled on the banks of Lough Neagh, in the county of Derry, in Ireland. Like Codden, he might boast that he was a "farmer's son." Born in February, 1777, and dying on the 10th of October, 1845, he was in his 69th year at the time of his decease. His early education, such as it was, he obtained at a grammar-school, kept by a Catholic pedagogue, the brother of the parish priest. The village school-boy was the type of the future man; for he confessed that he was miserable when not at the head of his class, and would sit up till midnight conning the lessons of next day. At the age of fifteen, this instruction, whatever its amount, was at an end, and we may readily suppose that it formed a small portion of that varied, extensive, and miscellaneous information which distinguished him in after life. He was now apprenticed to a surgeon-apothecary in the county of Antrim, whence he was transferred to another in Belfast, and, at the end of four years, went to London, without either money or friends. The manner in whieh he contrived to obtain an acquaintance with anatomy and surgery, at long intervals and by brief instalments, might shame the sybaritic students of our day In 1798, he passed an examination as surgeon's mate, in the Navy, and was appointed to the Mercury frigate, where he devoted every hour to study, visiting the naval hospitals whenever the ship was in harbor, and winning the golden opinions of his captain, who winked at his absence from the ship for some months in the winter of 1799, when he worked night and day in London. At the age of 22, he was made full surgeon in the Navy, and accompanied the expedition to Egypt. His fatigues and exertions produced an illness which compelled him to return to London, where he studied in Great Windmill Street, under Mr. Wilson, who stated in a certificate, that he actually *lived* in the dissecting room. He had expended his last guinea, and midwifery lectures were yet to be obtained. He applied to Dr. John Clarke, who, with characteristic generosity, instantly gave him a ticket of admission, and invited him to his table.

In 1803, he sailed for the East, and during the next three

years, in India and in China, he laid the foundation for his first, and perhaps, most permanent work, "The Influence of Tropical Climates on European Constitutions." Of that work, it is only necessary to observe, that it is distinguished for soundness of physiological views, acuteness of observation, and variety of matter. It is still the text-book of the tropical practitioner, and is likely long to continue so. In autumn 1806, he married Miss Charlotte Wolfenden, of Lambeth, who now survives him, and by whom he has had six children. The eldest and the youngest have followed the profession of their father; the former, Mr. Henry James Johnson, being assistant-surgeon to St. George's Hospital, and the latter, Mr. Alliot Johnson, residing there as house-surgeon. The work on Tropical Climates was not published till 1812, and then at his own risk and expense. Its success was decisive, though not immediate. In 1809, he was at Walcheren, and this and his Indian expedition sapped the vigour of a constitution naturally excellent; for, in the East, he suffered from dysentery, which was destined to cut him off at Brighton, after the lapse of 40 years,—and at Walcheren, he contracted ague, which, as has been the case in many instances, re-appeared in London, and nearly proved fatal to him there.

At the peace of 1814, Dr. Johnson served in the "Impregnable," when the late King William IV., then Duke of Clarence, hoisted his flag, for the purpose of conveying the Emperor of Russia, King of Prussia, &c., to this country. He attended his Royal Highness during an attack of "hay fever," and so pleased was the Duke with him, that he made him his surgeon-in-ordinary, appointed him "physician extraordinary" on his accession, and always treated him with a considerate kindness.

At the conclusion of the war, Mr. Johnson settled at Portsmouth, as a general practitioner, and was getting into good practice, when ambition and ill health both prompted him to try his fortune in London. He had taken out a Scotch degree, possessed about five hundred pounds, had one friend in the metropolis, Sir Wm. Young, and with this stock of worldly means he committed himself, at the age of 41, with a wife and five children, to the mercies of the modern Babylon. Though weak in body, of nervous temperament, and desponding turn, he had that determination and singleness of purpose which discards "impossible" from its vocabulary; like Sheridan, he probably felt "it was in him, and must come out."

It was a bold step for a moneyless and a friendless man to start in London:—it was bolder, at his own risk and expense,

to originate at the same moment the "Medico-Chirurgical Review." But its success was at once the omen and means of his own, and no quarterly medical journal has ever attained a larger circulation, or exerted wider influence. His labors for a long period were arduous—practice in the day was succeeded by the toils of the desk at night; and for fifteen years he wrote every page of a work of considerable bulk, and remarkable for the condensation of its matter. This could not go on for ever. Hæmorrhoids and fistula, for which he was operated on by the late Sir Astley Cooper, and the present Mr. Guthrie, were followed by dyspepsia, in such an aggravated form as those only can understand who know what the malady is to a nervous frame, exhausted by bodily and mental labor. But out of evil comes good. His own sufferings directed his attention to the subject of Indigestion, and were the immediate cause and indeed foundation of his essay upon that complaint. The publication of that work at once raised his practice to as high a pitch as was compatible with his own inclinations and strength. The remainder of his life was as active, though not as chequered and anxious as that which had gone before. Incessantly occupied with his patients, the Review, his various works, (for he was an author to the last,) and his tours of health, in which he engaged with all the ardour of a boy, he could scarcely have been said, except in sleep, to have passed an unoccupied hour. His meals were hurried, he entered into no society, and his life would not seem to have much of enjoyment in it. But it suited his tastes, and was the natural fruit of that restless energy which had made him all that he was. A mere enumeration of his published works, none of them compilations, will be sufficient evidence of his industry, some of them, at least, of his talent as a writer. The list will be found below.

It only remains to weigh, in a few words, his public and private character. The latter is easily disposed of,—a good husband, a kind father, a warm-hearted generous man, his memory is embalmed in the affectionate remembrances of those who were connected with him. As an author, he was remarkable for facility of composition, a felicitious, though not always a correct style, and an original vigour and raciness of observation and expression that redeem some faults, and make his works eminently readable. He may almost be called the Cobbett of Medical Literature, the same boldness, terseness, and straightforwardness being characteristic of the writings of both. The popular seal of success has at all events been set on all he wrote, whether professional or general. Every

production of his pen has met with a large sale, and most of them have gone through numerous editions.

As a practitioner, he was, in many respects, a model. Simple, unostentatious, his kindness was proverbial, and probably no man, since Dr. Baillie, has been more beloved by his patients. His liberality amounted to a fault, (being oftentimes imposed on) and almost indiscriminate. It has curtailed what might have been a large private fortune, but it has achieved its object, for it gratified a kindly disposition, and ministered to the necessities of others. Peace to his ashes, for they are those of an able, and what, perhaps, is better, of a good man.

WORKS BY DR. JAMES JOHNSON.

Tour in Ireland, with Meditations and Reflections.

Influence of Tropical Climates on European Constitutions; with additions by J. Martin, late Presidency Surgeon, and Surgeon to the Naval Hospital, Calcutta.

Practical Researches on Gout.

An Essay on Indigestion.

Change of Air, or the Pursuit of Health and Recreation.

Influence of Civic Life on Human Health.

On Diseases of the Liver.

The Recess, or Relaxations in the Highlands and Lowlands.

Economy of Health, or The Stream of Human Life from the Cradle to the Grave.

Pilgrimages to the German Spas.

Excursions to the Principal Mineral Waters of England.

The Medico-Chirurgical Review.—[*London and Edinburgh Monthly Journal.*

THE WESTERN JOURNAL.

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LOUISVILLE, FEBRUARY 1, 1846.

GEORGIA LUNATIC ASYLUM.

We have looked through the report of Dr. David Cooper on the "Lunatic, Idiot, and Epileptic Asylum of the State of Georgia," and find in it much to interest the physician and philanthropist. This institution was opened on the first of November, 1842. It is capable, at present, of accommodating one hundred patients; but, when the buildings now in progress shall have been completed, will be spacious enough to receive five or six times that number. The Legislature of Georgia have appropriated, at different times, sums to the institution, amounting in all to $45,000. The State has the privilege of sending its insane paupers to the asylum, and persons who are able to pay are charged the very small sum of $100 per annum, "for board, medical attendance, clothing, &c." No institution in the world, of the same character, affords these accommodations at so low a price. Yet, from the report of the resident physician, we are fully persuaded that the accommodations will be of the best kind. The edifice is constructed upon the most approved model, and embraces every comfort which ingenuity has introduced into modern buildings, both as to warming, cleanliness, and comfort. The grounds pertaining to the institution are ample, and every facil-

ity for enjoying exercise in the open air, in riding, walking, or working in the farm and garden will be afforded to the inmates.

It is earnestly to be hoped that the Legislature of the State will carry on to perfection the noble work which it has commenced. Dr. Cooper demonstrates, in his report, that the asylum will be a great saving in money to the State. It shows, beyond all possibility of cavil, that the lunatics and idiots can be kept in a public institution at a much smaller cost than is now paid to individuals for their maintenance by the commonwealth. And in connexion with this exhibit, it presents a picture of human wretchedness, springing unavoidably out of the system of committing to individuals without responsibility the guardianship of the insane, at which the stomach, as well as the heart, turns sick.

The Lunatic Asylum of Georgia is situated within two miles of Milledgeville, of which it commands a picturesque view, in a district of country represented as being healthy, and within a few miles of the great central rail road. During the year, beginning November, 1843, and ending November, 1844, it had thirty patients, of whom four were discharged, three eloped, and one died. The cost of maintaining these, together with a steward and a matron, equal to nineteen persons for an entire year, was $450.

Dr. Cooper subjoins to his report a condensed history of all the cases in the asylum. We have room to notice but a single one of these, the particulars of which are extraordinary. A convict from the penitentiary was removed to the asylum in an idiotic condition, having been previously a lunatic. His appearance was eminently fatuous; from January, 1843, to May, 1844, he was never seen to take notice of a single incident, or heard to speak a syllable, never ate or drank unless food was given to him, never changed his place unless required to do so, and gave no heed to the calls of nature in other respects. Dr. Cooper on one occasion watched him for two hours without witnessing the slightest muscular movement of his face, even so much as the winking of his eyes. The slobber driveled from his mouth, and sometimes collected in his throat until he was threatened with suffocation. His abdomen swelled, showing signs of dropsy, and his lower extremities became œdematous. For these symptoms Dr. Cooper gave him hydragogue cathartics, and after their operation, and the removal of the hydropic appearances, he showed some signs of returning consciousness, scratching his leg,

and, after a time, asking for water and food. He continued slowly to improve, began to walk, and to obey the calls of nature voluntarily, and by the first of September was so far recovered, that he was able to effect his escape from the asylum, and to make his way on foot to his mother's house, a distance of one hundred and fifty miles.

This report is not carefully written, and is worse printed; but it presents to the people of Georgia a mass of facts in which they must feel the deepest interest. And not to the people of Georgia alone. It has interest for all who dwell in the Southern States. The institution whose brief history it records is another added to the asylums for this class of our afflicted, and is opened on terms so low that many, who have not heretofore sent their unfortunate friends abroad, will be able to avail themselves of its shelter.

INTRODUCTORY LECTURES.

Our notices of these productions must necessarily be brief and superficial, but we are not willing to let any with which the authors favor us pass entirely unnoticed. Many of them abound in valuable thoughts, and are written in a pure and elevated style.

Professor Harrison, of the Ohio Medical College, selected as the theme of his discourse the "Sources, Evils, and Correctives of Professional Discontent"—a subject in which all of our readers necessarily feel a lively interest. It comes quite home to their business and bosoms, and if the lecturer can point to a safe, certain, and pleasant remedy, he will receive the abiding gratitude of the profession. We cannot say that he has discovered a specific, much less a *panacea*, but we take great pleasure in saying that his sentiments are admirable, and although his style is not free from the tincture of which we have sometimes spoken, his lecture will exercise a beneficial influence upon those who listened to it, as it was delivered by its eloquent author, and will fortify and encourage any desponding or querulous member of the healing art who reads it. Whatever may be thought of some of Prof. H.'s theoretical views on medicine, there can be but one opinion respecting his sentiments on moral and religious subjects. They are just and elevated, such as become a teacher in his responsible station.

Professor Linton, of the St. Louis University, delivered the introductory lecture for his colleagues this season, and we have had the pleasure of perusing it. Much of the discourse is taken up with a eulogy on chemistry, which Prof. L. holds should be taught in every large city "at the public expense." We hope the eloquent remarks of the professor will inspire his pupils with a just admiration for this science, which, we suppose we are fully warranted in saying, is generally very much underrated by students and practitioners of medicine. Towards the close of his lecture the writer becomes metaphysical, and at last controversial. His school has been assailed, and he claims the right of defending it, which he does in a right manly spirit. He compliments the "Sisters of Charity" for the self-sacrificing spirit with which they devote themselves to the afflicted, one of the results of which is the erection of Hospitals and Asylums in which medicine is most advantageously taught. If he manifests more warmth of feeling, in some passages, than seems consistent with good taste, let it be remembered that he was speaking in defence of an institution in which his whole soul is enlisted.

Professor Bedford's introductory lecture in the New York University has been for some weeks on our table. It is devoted to the defence of Obstetric Medicine, and an exposition of the responsibilities and duties of the accoucheur. The principles of action are laid down, and then enforced by examples. Some of the illustrations are shocking enough. One woman is mentioned, whose uterus was ruptured by the violence of the operator, the small bowels escaping at the rent, while the body of the fœtus was removed, and the head left in the cavity of the womb! The lecture is rendered graphic and practical by the history of other cases, and, altogether, is a vivid and instructive discourse.

A SUIT FOR FEES BY A CLAIRVOYANT.

The Boston Medical and Surgical Journal copies from a New York paper an amusing account of an action brought by a clairvoyant for medical services. Livingston and Davis the plaintiffs, practising upon the plan of medical clairvoyance, had attended the family of David Jackson, examining and prescribing for his wife and daughter. The bill claimed was $50. Davis, according to the

witnesses, was put to sleep, by his associate, when he proceeded to examine the patient, and describe the remedies to be administered; these being written down were invariably given, Livingston himself never examining the patient, and the clairvoyant doing so only in his mesmeric state, and with a handkerchief over his eyes.

The court decided in favor of the defendant, principally, it is stated, "on the ground of the deception and fraud of the system."

MYSTERIES OF TOBACCO.

This is the title of a little work published by Wiley & Putnam of New York, from the pen of the Rev. Benjamin I. Lane, and although claiming a paternity other than medical, it comes within the purview of the medical critic. It is an argument against tobacco, and in several chapters discusses the nature of "the nauseous weed," its influence upon the body, the mind, and the morals; the illusory influence of tobacco, its filthiness, and its expensiveness. But *cui bono?* "To write against tobacco, with its mysteries and its luxuries," is, indeed, "an unpromising business." The author of this little book feels it to be so, but he is nerved with the hope of doing good, and so "raises the note of warning, and spares not." He gives, first, the analysis of tobacco; then some experiments by Fontana upon animals showing its poisonous character, and, lastly, its medicinal qualities. In the chapter on the physical effects of tobacco, he cites a cloud of witnesses to prove its injurious influence upon health. Its influence upon the mind he thinks is also pernicious; for he does not agree with the physician who was asked by a lady, whether he thought snuff injured the brain of those who use it, and who replied, "no, for nobody that has any brains uses it." This is not quite true; but it is a fact, he adds, "worthy of note in the history of tobacco, that its use began among the ignorant savages."

The fault of this well-meant volume is, that the picture drawn in it of the mischief done by tobacco is exaggerated. The author promised "nothing to extenuate, nor set down aught in malice," and the truth is certainly revolting enough; but he has not stuck to his promise. He has not been satisfied to show the evils of chewing and smoking in their full natural size—he has held up to the eyes

of his readers a magnifying glass, by which their proportions become, not hideous, but ridiculous. Still, we wish every smoker and chewer would read the "Mysteries of Tobacco," that they might see how the indulgence appears to, at least, one sensible, eloquent, and learned man. Or rather, we wish, with Mr. John Quincy Adams, to whom the volume is dedicated, who was once addicted to the use of tobacco, "that every individual of the human race afflicted with this artificial passion, could prevail upon himself to try but for three months the experiment which he made, sure that it would turn every acre of tobacco-land into a wheat-field, and add five years of longevity to the average of human life."

We thank the publishers for this spirited tract, which, with several other volumes to be noticed, we have received through Messrs. Maxwell and Prescott from the same publishers.

VESTIGES OF CREATION.

A third edition of this fashionable work has been called for by the American reading public, and is issued by Wiley & Putnam in a beautiful dress. These gentlemen have shown a becoming care for the orthodoxy of their countrymen by sending abroad the antidote bound up with the poison, in the shape of an admirable critique, from the North British Review. The former edition contained a noble defence of the truth, in a preliminary article; this gives the *coup de grace* to the sophistry of the Vestiges in an appendix. We examined the doctrines of this specious volume at considerable length, some months ago; since writing our article we have met with the following anecdote respecting it in an Edinburgh paper, with which we commend it to the curious of our readers, as a "scientific romance" of rare interest:

"We have been told that on its first appearance it formed the subject of a rather curious conversation between three scientific gentlemen,—a zoologist, a geologist, and an astronomer. 'Wonderful book!' said the astronomer, 'it reads like a novel, but its astronomy is wretched.' 'Say you so!' exclaimed the geologist, 'why I read it with very great interest indeed, and found nothing very bad in it except its geology.' 'And I,' said the zoologist, 'have also read it with interest, and liked its geology and astronomy very much, but found its zoology mere nonsense.'"

EPIDEMIC SMALL-POX.

Small-pox has prevailed to a very unusual extent in this county for several months past. In every quarter of it cases have arisen, and excited much alarm, although, for the most part, they have assumed a mild form, the subjects having previously had the disease, or been vaccinated. People are strangely negligent of vaccination, and alarms of small-pox are necessary, now and then, to awaken them to a sense of its importance. The disease is attended with very little danger or suffering, in persons who have been impressed with the vaccine virus. Such cases scarcely require medical treatment, and are followed by no disfiguration. The profession ought to take advantage of the present excitement on the subject, to diffuse the prophylactic as universally as possible.

BOOKS RECEIVED.

In addition to the works already noticed, we have received from Wiley & Putnam, through Messrs. Maxwell and Prescott of this city, the following works:

Gray's Botanical Text Book, a neat duodecimo volume, illustrated with numerous wood cuts, of 500 pages. This, we believe, is esteemed the best elementary work on botany extant in our country.

Newnham's Human Magnetism.—This is an attempt to show the utility of the application of mesmerism to the relief of human suffering. We confess our want of faith in its efficacy, but nevertheless shall give the author a hearing. We shall look into his "dispassionate inquiry" in a future number. Meantime, those who are curious on the subject will find it discussed in this work by one who is a thorough convert to its mysteries and its magic.

Fowne's Prize Essay.—This is a charming work; we have read it with the greatest pleasure. It combines every element of interest —a simple, lucid style, scientific details novel to all but the professed chemist, and views of the arrangement and constitution of matter which fill the mind with admiration and delight. The subject is "Chemistry as exemplifying the Wisdom and Benevolence of God." A more fascinating volume no one cold wish to possess.

Lyell's Travels in North America.—This is a most captivating book of travels, abounding in just and accurate observations, liberal

views, and scientific information interesting to every class of readers, especially those who have a taste for geology. Mr. Lyell is one of the most gifted and learned foreigners who has traversed our great continent, and his remarks on its configuration and structure, its fossils and its animals, its rivers, lakes, and estuaries, its institutions and people, will be found worthy of his high character. We hope to find room, during the summer, for an extended notice of his Travels.

To our friends, Lea & Blanchard, we are indebted for several works of great value, most of which we shall be unable to notice, at any great length, in our present number. These enterprising publishers have issued new editions of *Meigs' Velpeau's Midwifery*, and *Churchill's System of Midwifery*, which standard works will be found at the bookstores of Maxwell and Prescott.

Durlacher on Corns, Bunions, Diseases of the Nails, and general management of the Feet.—This is the first treatise on these ailments, so far as we are informed, that has issued from the American press. It is from the pen of the '*Surgeon Chiropodist*, by special appointment, to the Queen,' and appears to be scientific. We shall notice it hereafter. It is from the press of Lea & Blanchard, who take care never to send forth anything trashy.

DR. BORLAND'S ESSAY ON MILKSICKNESS.

This is a neatly printed pamphlet of 45 pages, octavo, on a subject of much interest. The paper was originally drawn up for the medical society of Memphis, where the author then resided. Dr. Borland does not profess to add anything from original observation to our previous knowledge of the subject, but merely to act the part of a compiler, bringing together and comparing the observations of different individuals. We may remark that his opinion, carefully formed, is, that the disease arises from a *mineral poison*, which may be derived directly from the soil or water, or indirectly through vegetables; that this poison may be imbibed by more than one kind of vegetable, and that in all researches hitherto made, the *cryptogams*—mushrooms—have been too much neglected. The pamphlet displays extensive reading, and is very well written. It is dedicated to Dr. J. R. Buck, of this city.

We cannot but congratulate Dr. Borland on his return to professional engagements after an absence of two years—a return which he thus signalizes. It is always to us a matter of deep regret to see an accomplished physician wandering amid the mazes of politics, or sauntering along its highways and byways—it is a mingling of things divine and human very foreign to our fancy. We trust our friend will for the future let Polk and Clay and the aspirants for the Presidency, together with Texas, Oregon, and California, all go by the board, and turn his attention exclusively to curing disease, and raising soldiers for the State. C.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

MARCH, 1846.

ART. I.—*Letters from Europe.* By JAMES C. CROSS, M. D., late Professor of the Institutes of Medicine in Transylvania University.

PARIS, December, 1845.

GENTLEMEN:

The subjects treated of in this communication and those which may follow will not be classified, and for an obvious and, we trust, a sufficient reason. The facts as they come to our knowledge will be registered at once, and unless we were to re-write them, and for this we have not time, no particular order could be observed. If an arrangement different from that which may result from accident should be deemed necessary, it can be effected by the compositor as he sets up the several articles.

In the *Gazette des Hopitaux*, M. Rostan has some useful remarks on the *Symptomatology of Nervous Affections.* The chief phenomena to which they give rise consist in an aug-

mentation, perversion, diminution, or abolition of the functions of sensation and motion. Formerly those of motion were apparently much more considerable and numerous than at present. The cause of this is found in the fact, that pathological anatomy has made such progress that we are now justified in referring many symptoms, considered as nervous until recently, to local lesions, such as encephalitis, meningitis, softening of the brain, &c. Some authors believe that neuralgia results exclusively from inflammation of the nerves. It is, however, generally an affection of the sensibility; we do not intend saying that nervitis never exists, but in the great majority of cases it is impossible to recognise the least appreciable trace of anatomical lesion.

Neuroses may attack the organs of all the senses; thus there may be neuroses of sight, which consists in perversion, diminution, or complete abolition of the function; neuroses of the voice; and the author speaks of a hysterical woman who was rendered completely aphonic. Bleeding, antispasmodics, blisters, and the most powerful and painful revulsives were employed ineffectually. M. Rostan felt fully assured that the woman had no motive to impose upon him; and having seen noticed in a journal another case very similar to the one under his treatment that had been completely cured by electricity, he determined to make trial of it, and to his great astonishment the voice gradually returned under its influence; from which he concludes that it was a case of nervous mutism independent of organic lesion.

The neuroses of intelligence deserve a moment's notice. On a former occasion, M. Rostan endeavored to show that every modification of mind was the result of a modification of the organ of intellection; that is to say, of some change in the nervous centres. Whenever there is a perversion of intelligence, as it cannot be admitted that an immaterial being is susceptible of perversion, we should look for the cause of the perversion in the organ of thought. It should, however, be remarked, that the existence of neuroses of intelligence is not incompatible with the principles of organicism; for why

should there not be neuroses of the brain as well as other parts of the nervous system? The neuroses may attack the apparatus of organic life; allusion, however, is not made to gastralgia, for it is the most frequent and best known of them, but to those of respiration, in which there is observed nervous dyspnœa, anxiety, and difficult respiration, which with propriety can be ascribed only to a lesion of innervation. Although he has always maintained that the asthma of the aged is not a nervous disease, M. Rostan says that he never has intimated that there were not neuroses of the respiratory apparatus. Although there are cases of real nervous dyspnœa, he remarks that after having practised medicine thirty years, he has never seen a single case of what authors denominate angina pectoris, descriptions of which are so common in medical writings. With the symptoms of angina pectoris he has always found the pulsations of the heart very violent, and other signs characteristic of an organic affection of the centre of circulation, or of the lungs themselves. He regards angina pectoris as a symptom only, and maintains that all the cases of it that he has observed he could refer without difficulty to a sensible and appreciable organic alteration, but is willing to admit that others may have met with something purely nervous. He does not deny the existence of nervous pulsation of the heart, such as those caused by moral emotions, joy, sadness, fright, &c.; but all others arise from peculiar states of the blood, as in anemia, chlorosis, &c. There are neuroses of the urinary apparatus in which there are alterations of the color, consistence, &c., of the urine, and which are symptomatic of a nervous state of the secretory or excretory apparatus. He speaks of a patient who, now and then, was suddenly attacked with a very abundant mucous discharge from the nares; not only was it copious, but continuous, and resembled the white of an egg in a liquid state, and this, too, without pain, swelling of the mucous membrane, or lachrymation. Generally this happens as a consequence of some vivid moral impression. The vesical mucous membrane may be similarly affected, and then the urine presents the appearance and consistence of the ca-

tarrhal urine, with which physicians are familiar. Neuroses of the genital organs are very common. Priapism, satyriasis, and nymphomania, are doubtless purely nervous, and wholly independent of all material lesion. He professes not to know exactly the seat of these affections, but is inclined to refer them, with Gall, to the brain, as that organ is the admitted seat of hysteria. This is but a brief and rapid outline of the views of M. Rostan, on the principal neuroses, and we shall add but a few words in regard to what he says on the subject of their diagnosis. They are uniformly intermittent, and this is a most important circumstance in doubtful cases. When they are continuous they are exceedingly difficult to recognise, and great skill and experience are necessary to determine the diagnosis with any degree of precision. The neuroses are usually very protracted; they often persist for months, and sometimes even for years. They rarely terminate in death, and the prognosis, if deduced from the intensity of the symptoms, would bespeak greater danger than exists in reality. The neuroses after having continued a certain length of time become chronic, and then they are rarely cured; and when this happens, as it does sometimes, we are surprised at the manner in which it is effected; it takes place suddenly and apparently without cause. In no other affection has hereditariness, as a cause, more influence than in the neuroses. It is very common to witness them in those persons whose parents have been similarly affected.

Spontaneous Cure of Phthisis-Pulmonalis.—It is not uncommon to find, in post mortem examinations, puckered depressions, generally at the summits of the lungs, which are considered as the result of ancient cicatrices in those who have not fallen victims to pulmonary consumption. Dr. Bennett, it appears, has recently been prosecuting the investigation of this subject in the Royal Infirmary of Edinburgh, and he found old cicatrices of the lungs in 28 cases out of 73; and this result added to that obtained by M. M. Rogee and Boudet of this city—for they have been inquiring into the matter also—

establishes the fact that phthisis has been spontaneously cured in one-third, if not one-half, of those who die after the age of forty. This result, which is opposed to the common opinion, and which reposes upon facts that it is impossible to attribute to any other cause, is not, however, contradicted by what we know of the chemical and organic composition of tubercles, or with what we have been taught by the study of their development. Indeed, all that we certainly know of the chemical composition of tubercle, is reduced to the established fact that in the first period of its development it differs from lymph only because it contains more albumen, and in its latter period more earthy salts. As to its intimate organization, it is certain that it is not of the nature of the malignant tissues, cancerous for example; and notwithstanding the opinion of M. M. Gulliver and Vogel, who contend that it is not organized, we can detect traces of cellular organization, but much more numerous granulations and variously formed corpuscles that cannot be easily described, but which are readily recognised when they have been once distinctly observed. Two opinions prevail as to the formation of tubercles. Some ascribe them to inflammation, and others to a peculiar and vitiated state of the constitution. Now, neither of these are irreconcileable with the idea that phthisis may be spontaneously cured. The only difference, in truth, between tubercle and the products of ordinary inflammation consists in the absence in the former of all disposition to become organized; tubercle presents granulations and imperfect cells, while in the products of normal inflammation all the elements are perfect. Now, as these two different products are formed by the exudation of the *plasma* of the blood, the essential distinction between them should be found in a difference in the composition (chemical and vital) of the *plasma* of the blood that enters into their composition. Hitherto chemistry has reflected no light upon the exact nature of this difference, but it is probable that it results from the presence of *protein*, which has not so great a tendency to become organized as fibrin, and it is quite certain that when tuberculous matter is reduced

to the molecular state by disintegration, it may be as readily observed as the products of normal inflammation. If, therefore, there is nothing in the nature of the elements of tubercle to prevent their absorption, there is no reason why we should refuse to regard the cicatrices found most generally in the summits of the lungs, where we know that the tubercles are most commonly deposited, and when, too, they are discovered in aged persons who have died of other diseases, as evidence of the previous existence of phthisis pulmonalis, and of its spontaneous cure.

The treatment of tubercular consumption has heretofore been almost exclusively directed on empirical principles, and consequently no one has furnished absolutely useful results. Perhaps it would have been otherwise had we observed the course pursued by nature in the cures that have been spontaneously effected. This we have endeavored to do, and, we think, not without encouraging results. But two indications need be observed in the management of those threatened with, or actually laboring under phthisis. First, the morbid state of the blood that results from imperfect nutrition; and secondly, the local inflammation that produces an abnormal secretion—a secretion containing the elements of tubercle. These are the indications which Dr. Bennett points out, and to which he invites the particular attention of physicians; but if the reader will take the trouble to refer to the *Western and Southern Medical Recorder*, he will find them laid down by the editor, and dwelt on in a sufficiently full and explicit manner. All the information we have on this subject—derived from the researches of chemistry, morphology, and physiology—go to show that the state of the blood, in the first place, is mainly attributable to an excess of oxygen in the economy, which combines with the tissues—causes their destruction, and produces acidity of the alimentary canal, and afterwards to an excess of azotized or albuminous matters, and at the same time to the absence of carbon and oleaginous matters in the chyle, the blood, and other tissues, with the exception of the liver, which is the great emunctory of fatty and

carbonaceous matters. There are then three objects to be kept constantly in view in the treatment of phthisis. First, to remedy the dyspeptic state of the alimentary canal, and particularly the acidity of it which too frequently abounds; secondly, to direct such articles of food to be eaten as promise to form a suitable kind of chyme; and lastly, to subdue the local inflammation. There are various means for the first purpose, but Dr. Bennett particularly commends mixtures with which he has perfectly succeeded in some cases, and with which he has subdued vomiting that had triumphantly resisted all other modes of treatment; the second is to be attained by a proper regimen: digestible food, milk, oleaginous and albuminous substances, and an equable climate, the tendency of which should be to diminish the excess of oxygen; of these means, Dr. Bennett particularly recommends cod-liver oil; and the third should be counteracted and controled by local blood-letting—cups are preferable to leeches. Now, those who are familiar with what we have taught, or with the contents of the *Western and Southern Medical Recorder*, know full well that the above principles of treatment have been inculcated in the most emphatic manner for a number of years, and this course was pursued, not only because of the great advantages of an invigorating over a debilitant treatment, but because the latter has been recommended by a teacher more notorious than distinguished, and who has exerted a more extensive influence over the destinies of the profession in the valley of the Mississippi than any man of ten times his merit should. His *diet absolute* has immolated thousands, and we think it full time that the public should be cured of its credulity, and he of his infatuation.

Successful Operation for Cataract after sixty years of Blindness. By M. Serres, Professor of the Faculty of Montpelier.—Boichat, 67 years of age, cutler by trade, consulted M. Serres in March, 1844, for a wound of the right eye, which had been several days previously inflicted by a foil. Treatment failed to prevent a loss of the sight of the wounded eye,

which reduced the patient to a state of perfect blindnes, for he had lost the sight of the other sixty years before from small-pox. The patient desiring M. Serres to operate on the right eye for cataract, he was induced to examine the left, in which he recognized the existence of a lenticular cataract, together with a slight albugo upon the external lateral segment of the cornea. Believing that the operation, if performed on the right eye, would be embarrassed with many difficulties, he proposed to operate on the left. To this the patient submitted, although under the conviction that it would prove useless, inasmuch as it had been of no service to him for the space of sixty years. A principal motive of M. Serres for wishing to operate on the left eye was to ascertain, if possible, how long the function of an organ may be suspended without being annihilated. The operation was performed, and even before it was finished, the patient exclaimed that he could see. This was believed at the time to be an optical illusion, but three days afterwards when the patient was visited for the purpose of ascertaining if there were any hope of the success of the operation, M. Serres was greatly surprised to find that it was perfect, and that the sight of the left eye was completely restored. Eighteen months after the operation the patient was still in the enjoyment of the vision of the left eye. This fact, which is perhaps unique in its kind, is a triumphant refutation of the assertion made by many writers, that in very ancient cataracts an operation must prove unproductive of good, as there is reason to believe that when the retina has been for a great length of time condemned to repose it has lost its sensibility. It cannot but be regarded as a very curious and interesting fact that after sixty years of a total suspension of its function, the faculty of distinguishing objects should be recovered simultaneously with the impinging of light upon the retina. It should be remembered that the vision of Boichat is not of that feeble and vague sort which is scarcely sufficient to conduct one along a street, but of that clear and full kind which enables him to read with facility. It may be objected that in this case, as the cataract

was incomplete, the retina had never been entirely secluded from the contact of the light. To this, Mr. Serres responds, that the man assured him in the most positive and formal manner that he had been completely blind of the left eye ever since he was six years of age—that after the loss of the right and before the left was operated on, he was entirely blind, and besides, at the moment of the operation the opacity of the pupil was so complete, that had not allowance been made for this circumstance the immobility of the iris would have led to the belief that the cataract was complicated with amaurosis. Had the integrity of the visual functions of the right side any agency in preserving the sensibility of the left? This is very possible, and therefore a difference may exist between those persons who have lost the sight of both eyes and those who have lost that of one only. As it is now evident that the sensibility of the retina is retained, notwithstanding the indefinite suspension of its functions, would it not be discreet when both eyes are affected with cataract, not to operate on both at the same time? If but one should be operated on, the other could be at some subsequent period, in the event of its failure, or in the event of the sight of it being lost after it had been restored?

Tobacco in Facial Neuralgia.—M. Gower commends in the strongest terms the use of tobacco in neuralgia of the face. For twenty years he has employed the tincture and infusion, locally applied, with the greatest success. This success, however, he remarks, was in some degree unmerited, for although his success was decided and satisfactory, he did not know whether it was owing to the stimulant or sedative action of the tobacco. He continued its empirical employment until M. Chippendale demonstrated that its efficacy was owing to the narcotine, and that the essential oil of the plant retarded its action by preventing the absorption of its narcotic principles. It is therefore to the extract of narcotine that the preference should be given. M. Gower has seen in three cases a single application of the aqueous solution of this ex-

tract, almost instantly not only calm, but prevent the recurrence of neuralgic paroxysms. This preparation rubbed on the side of the face is said also to relieve, almost instantly, tooth-ache.

Beef-Gall in Constipation.—Dr. Allnat remarks that although beef-gall is not at present employed by physicians, it does not merit the desuetude into which it has fallen. He speaks of it in constipation in the most eulogistic terms. His opinion is deduced from two classes of facts—the one theoretical—the other practical. Habitual constipation, he remarks, in sedentary persons, commonly depends upon the absence of bile. The contents of the bowels pass slowly through them because they are not sufficiently acted on by their natural stimulus to produce the degree of peristaltic action necessary to cause the evacuation of their contents. When this happens the stools are of a greyish complexion and solid, because of the absorption of the more liquid parts, and they then collect in masses in the large intestines, and assume a globular form, obstructing the bowels mechanically, and thus preventing the evacuation of their contents. Now, the author asserts, if these consolidated masses are exposed, out of the body, to the action of beef-gall, they immediately swell and are in a short time dissolved and present the appearance of natural fecal matter in color and consistence. The same effect is produced if beef-gall diluted with water is injected into the bowels of an individual laboring under obstinate constipation. Three cases, which we shall not trouble you with, are adduced in support of this assertion, and in which, after the employment of the most active purgatives and the most irritating injections, a clyster of beef-gall or the administration of pills made of the bile, after its evaporation and reduction, to the consistence of an extract, produced without griping or any other inconvenience, natural stools.

Now, besides the fact which we have already shown, and we trust in a satisfactory manner, that the paristaltic action of the bowels does not depend upon the supposed stimulant

properties of bile, and upon which the whole of Dr. Allnatt's theory rests; the bile has other and more elevated purposes in the animal economy. That it is an excrementitial secretion is now no longer a matter of doubt, and that its suspension interferes directly with nutrition, and produces general and very various derangements, we have illustrated and proved, and therefore if beef-gall has any particular efficacy in removing constipation dependent upon deficient or perverted action of the liver, or indeed, in the cure of any affection resulting from a kindred cause, it must be upon some other principle than that assumed by Dr. Allnat. Besides the theoretical absurdity into which the advocate of beef-gall has involved himself, the practical interest of his article rests upon one fact which he has failed to establish, but which is indispensable. He alleges that dry and hard feces are dissolved by beef-gall; that may be, but he has not shown us that it accomplished that object any better than oil or other fatty substances would under similar circumstances. When this fact is once established we may be encouraged to inquire whether or not it be true that the bile of one animal, and formed of very different materials, can perform the office of bile in the economy of another, not only of a different species, but different genus. The difference in the bile of herbivorous and carnivorous animals is amongst the most familiar of physiological facts.

Amongst the virtues of beef-gall there is one signalized by Dr. Allnatt, a notice of which should not be omitted entirely. We allude to its action upon opium with which it is combined, and the narcotic property of which it destroys. The constipating effect of opium is ascribed to its action on the liver, the secretion of which it either suspends or so much diminishes as to be insufficient to stimulate the bowels. This is a formidable objection to opium when we desire to produce its sedative effects only. If Dr. Allnat is to be believed, beef-gall is effectual in neutralizing the constipating effects of opium without impairing in the least its sedative action.

Art. II.—*Cases treated at the Louisville Marine Hospital.* Reported by Mr. Charles L. Lyle, and Mr. W. A. Harris.

Hematemesis.—James McGlinn, a native of Ireland, by occupation a ditcher, of intemperate habits, was admitted into the Hospital, August 11th, 1845. Three years ago he was engaged at work on the shores of the Tennessee river, and was compelled to labor constantly in water, sleeping in his wet clothes at night. After pursuing this life for several months he was attacked with intermittent fever. About this time he was advised to go to New Orleans for his health; he was improved by the travel and change of climate, but engaging in his laborious occupation in the suburbs of the City, in a short time he was taken with diarrhea, which persisted for several months before it was finally arrested—leaving him in a debilitated state, from which he never recovered. Six months ago, Hematemesis came on, after he had been enduring much fatigue and exposure to rain and cold, to overcome the effects of which he resorted to large potations of ardent spirits. The hemorrhage came on at night, after he had been indulging more excessively than usual in drink,—and recurred, at intervals, until he was admitted in August.

At this time his face was pale and blanched, his skin dry; pulse quick, small and feeble; tongue smooth and nearly exsanguineous. Nothing passed from his bowels but blood, which was thin, and of an arterial character. On the night of the 11th August, he vomited more than a quart of coagulated blood.

He was ordered to take acetate of lead, grs. iii., and opium, gr. i. The following day a fourth of a grain of tannin was exhibited every two hours. This course arrested the hematemesis as well as the discharge of blood by the bowels. He improved slowly under the administration of tinct. mur. fer. until about the first of September, when his extremities became œdematous, to which ascites followed shortly afterwards. The usual remedies for such cases were applied. The abdomen continued to enlarge, and became shining and tense.

Respiration hurried and difficult on account of the encroachment of the dropsy which compelled the patient to retain the semi-erect posture; pulse quick; a blowing sound of the heart.

An operation was deemed necessary for his relief, which was performed by Professor Gross on the 9th, by which upwards of two gallons of serum were removed.

10th. Saturated tinct. iodine was applied over the entire surface of the abdomen and a bandage applied. Was ordered tinct. fer. mur. and nutritious diet.

11th. Pulse 120, soft and small; skin dry and cool; tongue slightly furred and moist; bowels open.

12th. Treatment continued.

14th. Abdomen again becoming enlarged; fever and acceleration of the pulse during the evening.

15th. Water still increasing; prescription continued.

16th. Some fever, and at night tongue dry; bowels open; skin dry and hot; pulse still increasing in frequency.

17th. Abdomen painful from accumulation of water; some fluid escaping from the puncture; by means of cups a large quantity was drawn off, affording him much relief; large quantities continuing to pass through the puncture.

18th. Slept well during the night. Recurrence of hematemesis followed by syncope. Carb. ammonia, camphor mixture and brandy were exhibited for the purpose of stimulating him. To these sulphate of quinine, acetate of lead and tannin were subjoined, which constituted the treatment.

On the next day, about the same hour as on the preceding day, hematemesis again recurred, and was followed by fatal syncope; he died at 3 o'clock.

Autopsy.—On making an incision into the abdomen a large quantity of straw-colored serum was found; no attempt had been made at reparation of the puncture made by the trocar. Spleen enlarged, indurated, and its surface cartilaginous. The pleura also contained a quantity of straw-colored serum. The lungs pale, and containing two or three small calcareous deposits; otherwise healthy. Pericardium distended with serum; heart pale and flabby. The veins of the œsophagus, and of

the cardiac extremity of the stomach, varicose. Stomach distended with dark blood. Several small ulcers communicating with the varicose veins in the œsophagus. The blood found in the stomach and intestines was not coagulated.

Typhoid Pneumonia—Paralysis of the Leg from a Bed Sore.—The subject of this case is a native of Germany, 22 years of age, of sanguineo-bilious temperament, a brewer by occupation, and of intemperate habits; he was admitted into the Hospital on the 21st of October last. He was attacked three weeks previous to his admission with a short, hacking cough, slight fever, and pain in the right side of the chest over the infra-mammary region; had been subject to repeated attacks of delirium tremens.

When admitted he manifested great muscular debility, and much nervous irritability, which resembled somewhat paralysis agitans, or, perhaps, more correctly the mercurial tremor, as it was an involuntary trembling of the voluntary muscles, when unsupported. When admitted his pulse was small, feeble, and quick; tongue coated with a dark brown fur, fissured, dry, and red at the tip and edges; teeth covered with sordes; countenance sallow, with occasional flushing of the cheeks; bowels much constipated; expectoration slight and pneumonic; tenderness over the epigastrium; pain on pressure over the cervico-dorsal region of the spine. Auscultation revealed the crepitus rhonchus over the anterior middle lobe of the right lung; slight broncophony and dulness on percussion over the lower lobe; respiration feeble over the inferior anterior portion of the left lung. Prominent among these symptoms were a want of muscular tonicity and exhaustion of nervous influence, produced by frequent attacks of mania a potu; the the almost invariable symptom of which, (tremors) became more prolonged after each successive attack, until the morbid condition was permanently impressed upon the brain and great nervous centres.

Calomel and Dover's powder were administered in small and repeated doses—three of the former and five of the lat-

ter—until slight ptyalism was induced. Dry cups and blisters were alternately applied over the seats of pain and tenderness; strict attention was paid to the secretions; this, together with stimulants and tonics, consisting, mostly, of camphor mixture, carb. ammonia, porter, and quinine, constituted the treatment from his admittance up to the first of November. At that time the crepitus rale could be heard over the entire region of the right lung; expectoration profuse; nervousness so increased that he could with difficulty partially protrude his tongue, which was smooth and red; great restlessness and extreme debility; perspiration sour and at times profuse. He continued in this state, without any manifest change, for nearly a week, when he fell into a state of coma, or stupor, which continued for several days. Brandy, carb. ammonia, and other powerful stimulants were given in large and frequently repeated doses, and counter-irritants were applied over the cervico-dorsal region of the spine. Under this treatment the delirium disappeared, and with it the severer pneumonic symptoms.

On the 15th November, his nates were found extensively inflamed and disposed to gangrene. The parts were protected by means of cotton as well as possible, but owing to his exhausted condition, and the long continued posture on his back, a deep and extensive slough was formed, embracing the whole of the sacro-iliac, and part of the lumbar region. A poultice made of ground flaxseed, charcoal, and cinchona, was applied, after having moistened the parts with a weak solution of nitric acid, which, with the internal tonic and stimulating treatment, rapidly promoted the detachment of the slough. The ulcer extended farther and more deeply on the right, than on the left side; and when the gangrenous parts were thrown off, it exposed a large part of the iliac bones. At the same time were manifested symptoms of irritation of the bladder, as pain on pressure over the hypogastric region and frequent micturition. These, however, gradually disappeared as the ulcer healed.

Dec. 1st. Pneumonic inflammation subsided; ulcer healthy

and partially healed; countenance of the patient much bloated; considerable œdema of the lower extremities; dull pain frequently felt along the course of the gluteal, smaller sciatic and musculo-cutaneous nerves; accompanied by partial paralysis of the peroneal flexor and extensor muscles of the right leg, and toes, so that the foot is not only thrown out of its proper line of direction, but is also distorted and twisted upon itself, resembling somewhat that variety of club-foot termed *talipes varus.* Motion, or the slightest pressure over the lumbar region aggravates the pain, while the recumbent posture relieves it. There is also a loss of natural temperature in the affected leg and foot, which are constantly bedewed with a cold and clammy moisture. No involuntary retractions of the affected muscles can be excited, which is evidence that the process of ulceration affected not only the nerves of the part, but also the lower part of the spinal cord itself. For the relief of these symptoms the usual remedies have been resorted to, but as yet with but little success.

Feb. 1st. Ulcer has cicatrized; symptoms of incipient anasarca still continue; likewise tremors of the voluntary muscles, even when supported; pain along the course of the nerves of the leg and foot unabated; distortion of the foot somewhat augmented; secretions regular, and general health improved.

Louisville, February, 1846.

REVIEWS.

ART. III.—*On Diseases of the Liver.* By GEORGE BUDD, M.D., F.R.S., Professor of Medicine in King's College, London; and Fellow of Caius Cambridge. *With colored Plates and numerous Woodcuts.*—Philadelphia: Lea & Blanchard. 1846. 12mo. pp. 392.

[CONCLUDED.]

The subjects of this treatise are on every account so important, a knowledge of them is so necessary to the practitioner, and they are here treated with so much clearness and ability, that we are sure our readers will not be displeased at a continuation of our notice of the volume. In our last number we left our author on the *causes of abscess of the liver*, the most obvious of which, though by no means a frequent one, is a blow or other mechanical injury. The second, and, as he holds, far more frequent cause, *suppurative inflammation of some vein*, we announced, but were obliged to close our article without reciting any of the proofs adduced in support of the position. As we then said, the point strikes us as satisfactorily made out, and some of the evidence in its favor we will now proceed to give.

It is known that collections of pus in the lungs, liver, joints, or between the muscles, frequently follow severe injuries or surgical operations—that they form rapidly, and, with very slight local symptoms, often terminate fatally in a few days. So when mercury is injected into the crural vein of a dog, the animal, after a day or two, becomes feverish, is affected with cough and difficulty of breathing, of which he dies; and on examination after death is found with small indurated

masses and circumscribed abscesses in his lungs, each of which contains in the centre a small globule of mercury. In such cases the foreign matter is arrested in the capillary vessels of the lungs, for the pus globules are much larger than the globules of the blood; irritation follows, and a deposit of matter is the result. The lungs are the organs most likely to suffer from such an experiment, or from purulent phlebitis consequent on injury of the head or limbs, for the obvious reason that the irritating matters are conveyed directly to them, and may be wholly detained in their capillaries. In the latter case abscesses would be found only in the lungs. But it often happens that the liver becomes the recipient of a part of the pus, and then it too is the seat of scattered abscesses.

It would appear from some observations by Cruveilhier, that such abscesses are most apt to ensue upon injuries involving bones, inflammation of the veins in the interior of bones being more likely to cause them, than inflammation of the veins of other textures. He placed a globule of mercury in the medullary cavity of the femur of dogs, and never failed to find it scattered through the lungs, each globule the centre of a small abscess. Injuries of the head, it has been long noticed, are especially liable to be followed by hepatic abscesses, and in the above circumstances we have a satisfactory explanation of the fact. In like manner cancer of the breast may be the source of cancerous tumors in the lungs and liver, the cancer-cells, like the pus-globules, being disseminated through the veins. In view of all this our author thinks that—

"It may be considered established, that the abscesses which form in the liver and other organs, after surgical operations and injuries of the head or limbs, are owing to suppurative inflammation of a vein, and the consequent contamination of the blood by pus. The globules of pus, mingled with the blood, are conveyed to the capillary vessels of the lungs, and, it would seem, by becoming mechanically arrested there, excite circumscribed inflammation and abscess. If any of the globules pass through the capillaries of the lungs to the left side of the heart, they are sent in the arterial current to other organs, and becoming arrested in the capillaries of these

organs, excite, as in the lungs, inflammation of limited extent, rapidly passing on to abscess."

Thus far the author has alluded only to inflammation of those veins which return their blood immediately to the vena cava, in which case the pus must pass through the capillaries of the lungs before it can be sent to other organs. But there are veins in the body of a different destination—those that go to form the vena portæ. One of these becoming inflamed, the pus goes not to the lungs first to be detained in them, but to the liver where it sets up suppurative action. Cruveilhier found it so; for when he injected mercury into one of the veins that feed the vena portæ, it was stopped in the liver, and became the source of abscesses there, just as it led to the same in the lungs when injected into the crural vein.

"He injected mercury into one of the mesenteric veins of a dog. At the end of twenty-four hours, the dog died, and the surface of the liver was found sprinkled with small spots of a deep red color, which extended four or five lines into its substance. In the centre of each of these red masses was a small globule of mercury."

Injury of any of these veins is often followed by abscess of the liver. Cruveilhier relates a case where it was consequent upon repeated attempts to return a prolapsed rectum. It has been known to result from operations on the rectum and for strangulated hernia. Hence our author concludes there is a third, and much more frequent cause of abscess of the liver than either of those mentioned: namely, *ulceration of the intestines, stomach, gall-bladder, or ducts*, all of which return their blood through the liver.

A connexion between abscess of the liver and dysentery has long been noticed, but in the opinion of Dr. Budd they are associated far more frequently than has been generally imagined. Thus, in twenty-nine cases recorded by Annesley, in India, there were twenty-one in which ulcers were discovered in the large intestine; in two others the bowel was otherwise diseased, and in the remaining cases, our author thinks

it probable, ulceration of the intestines existed but was overlooked. Of thirteen cases in which he made the autopsy, nine presented ulcers either in the large or small intestines, or in the stomach. Andral and Louis, without suspecting any connexion between ulcerated intestine and abscess of the liver, of sixteen cases noticed ulcers in the bowels, stomach, or gall bladder in eight, or one half. Of the others, one was caused by a blow, and four seemed the consequence of phlebitis. It is worthy of remark that in the latter five cases no ulcers were found in the stomach, intestines, or gall-bladder; deducting these cases attributable to other causes we have eleven left, which must be referred to ulceration in one or the other of these parts.

The author multiplies facts tending to the same point, but we do not deem it necessary to add to the testimony in favor of his position. Admitting then that abscess of the liver, where not dependent upon mechanical violence, is for the most part connected with ulceration of some part of the alimentary canal, the question may arise, is this from a spread of inflammation to the liver, or from some contamination of the portal blood? Obviously, Dr. Budd maintains, from the latter cause, and he goes on to say—

"This may be either by *pus*, formed by suppurative inflammation of one of the small intestinal veins; or by matter of other kind resulting from softening of the tissues; or by the fetid gaseous and liquid contents of the large intestine in dysentery, which must he absorbed and conveyed immediately to the liver. It seems probable, that contamination of the first kind usually gives rise to small scattered abscesses; of the last, to diffuse inflammation, and a larger, perhaps single, collection of pus. If the morbid matter be such, that it does not mix readily with the blood—as globules of pus or mercury—it will cause small, circumscribed abscesses, the rest of the liver being healthy. If, on the contrary, the morbid matter be readily diffusible in the blood, all the blood will be vitiated, and diffuse inflammation result."

But, he holds, it is not every form of ulceration of the stomach and intestines, that gives rise to abscess of the liver. It

is not apt to result from the ulceration attendant upon typhoid fever; nor from ulceration of the duodenum after burns, or of the intestines in phthisis. It seems to occur chiefly in conjunction with the sloughing ulceration in acute dysentery; "and with chronic ulcers attended with thickening and induration of the sub-mucous areolar tissue."

Not more than one of the causes assigned by our author for hepatic abscess is found, it would appear, in the same subject, and this circumstance is strongly confirmatory of his view of the origin of that malady. Where the abscess could be traced to a blow, or to suppurative inflammation of some vein that returns its blood immediately to the vena cava, there were no ulcers in the stomach, bowels, or gall ducts. And when ulcers were found in the intestines, they were not present in the stomach or gall-bladder.

Congestion, spirit-drinking, and the many other causes to which the abscess of the liver has been ascribed by authors, Dr. Budd contends, do not lead to that result. Ardent spirits excite inflammation, but do not produce abscess of the liver, according to his observation.

The size of these abscesses is often very great. Dr. B. mentions one which contained two quarts. He quotes a case from Annesley in which an abscess in the liver contained ninety ounces of matter; and one from Dr. Inman in which the quantity of matter was thirteen pints. As to the quality of the matter, he says:

"The matter in an hepatic abscess is usually white or yellowish; and is free from odour, unless when in close proximity to the lung, where it sometimes becomes decomposed and fetid, from the admission of air."

But not to dwell longer on the causes and anatomy of this form of hepatic ailment, we turn next to the *symptoms*, respecting which our author holds the following discouraging language:

"In most works on medicine, these have been described as being much more uniform than they really are. A picturesque

group is sketched, which it seems very easy to identify; but in actual practice, it is far otherwise. The physicians who have had most experience in this disease, confess their inability, in many cases, to distinguish it from other diseases of the liver; and in some, even to pronounce that the liver is the seat of disease at all. Here, as in the diseases of other internal organs, our diagnosis will be much aided by a knowledge of the circumstances under which the disease arises. This knowledge will make us observant of symptoms which would otherwise escape our notice, and will enable us to interpret them rightly."

This obscurity in the symptoms—this absence of all symptoms, in many cases, directly referrible to the liver—he attributes to the circumstance, that "suppurative inflammation is generally partial, and often involves only the *substance* of the liver, the natural sensibility of which is slight."

Among the symptoms—as dry cough, pain in the right shoulder, pain and tension in the right hypochondrium, and the general characteristics of inflammatory fever, there is one to which he attaches special importance;—that is, "permanent rigidity of the muscles of the abdominal parietes, but especially *of the right rectus muscle.*" The following case illustrates the value of this symptom, and deserves to be carefully noted:

"In the autumn of 1837, a sailor, 29 years of age, was admitted into the Dreadnought, immediately on his arrival from Calcutta. He was much emaciated, and stated that he had been ill thirty days of fever, and that during the last ten days, he had vomited every thing he had taken. His belly was much drawn in, and the parietes were extremely rigid, but there was no tenderness on pressure. He was somewhat thirsty, but afraid to drink, on account of the vomiting it immediately excited. My impression was that his disease was gastritis, and I prescribed for him accordingly. The symptoms increased, and at the end of a fortnight he could be got to take little besides toast and water, which he sipped rather than drank. He died about a month after his admission to the Dreadnought. The stomach was found apparently sound, but the liver was the seat of a large abscess, the presence of which was not even suspected."

Abscess of the liver may discharge itself in various ways. Thus, it may burst into the cavity of the peritoneum, if situated on the surface of the liver; or, adhesion forming, it may discharge itself through the abdominal parietes; if on the upper part of the liver, it may perforate the diaphragm and burst into the cavity of the pleura, or, more favorably, may make its way by adhesion through the lungs; or, finally, it may be discharged through the intestinal canal, adhesions having formed between the edge of the liver and the stomach, duodenum, or large intestine.

This malady is of a protracted character, even when not fatal, which is generally the case. The hepatic tissue and the hard gristly substance surrounding the abscess cannot contract; the cavity consequently remains unclosed, and continues to be filled with pus. It is, therefore, a matter of less consequence than would at first appear which direction the pus may take; for if the abscess cannot heal death must eventually occur, although in one case it may be longer averted than in another.

The treatment of suppurative inflammation of the liver, it follows from what has been said, is exceedingly unsatisfactory. If it is caused by phlebitis consequent on a wound or injury of the head or limbs, but little can be done. The general contamination of the venous blood by pus leads to inflammation in the lungs, and perhaps in other parts of the body—a condition of things for which we have no remedy.

Where its origin is in a blow we have more to expect from treatment. Active measures employed early may prevent the formation of matter. Mercury is one of the remedies which have been resorted to in all forms of hepatic disease; but its efficacy in inflammation of that organ is questioned by Dr. Budd; he considers that it is "peculiarly unsuited to suppurative inflammation of the liver."

In some cases there seems to arise a necessity for opening the abscess, but great danger attends the operation. A distended gall-bladder may be mistaken for an abscess—a mistake which would be almost immediately fatal to the patient.

This, however, may be avoided. The gall-bladder distended by bile is globular, circumscribed, hard, and equally resisting in every part; an abscess is soft and fluctuating at its summit, with a hard, resisting base, and is not so well defined.

A second and more serious danger grows out of the circumstance that the liver does not always become adherent to the abdominal parietes; in which case an incision would empty the pus into the peritoneal sac, and occasion sudden death. The directions of the author under circumstances of such uncertainty are the best that could be given.

"I would, then, never recommend opening an abscess of the liver, unless assured by circumscribed œdema, or a slight blush on the skin, that union had taken place between the integument and abscess. When these signs are wanting, and the skin has its natural appearance and color, we can never be sure that adhesions have formed, and if we thrust a knife into the abscess, we run the risk of discharging the matter into the cavity of the peritoneum."

He gives the method recommended by Dr. Graves for obviating this danger. This consists in laying open the abdominal muscles down to the peritoneum, filling up the wound with lint, and then waiting for adhesive inflammation to unite the liver to the side, and for the abscess to open of itself.—Thus we provide against two accidents; but the author enumerates others—as the entrance of air into the wound, which may lead to gangrene, and speedily carry off the patient; and, since the abscess when opened will continue to discharge until the system is exhausted by the protracted suppuration, he concludes that the patient only dies the earlier for our meddling.

Gangrenous inflammation of the liver occurs rarely, but cases of it are related by the author. In one, it followed gangrene of the toes from cold, and seems to have been excited by it; it was accompanied by gangrene in the lungs also. Gangrene, however excited, in one part, has a tendency, in the words of our author, "to cause gangrene in other parts remote from it and not subject to the same influence." He supposes this is

explained by the chemical law, that matter in a state of change tends to bring whatever parts it may touch into the same state of transformation. He quotes Rokitansky to the effect, that he has several times observed gangrene of the liver in connexion with gangrene of the lung, and never without gangrene of some other part.

The section which follows treats of "Adhesive inflammation of the capsule and of the substance of the liver, Cirrhosis, and other forms of inflammation of the substance of the liver." Various causes may excite these inflammations, but the most frequent is the use of spirituous liquors. The case of ascites and vomiting of blood, reported in this number of the Journal is in point. Dr. Budd relates cases marked by the same symptoms. These forms of liver-disease are most frequent in large towns where the poorer classes drink hard; the granular and hob-nail liver, called by the French cirrhosis, is familiarly termed the *gin-drinkers'* liver by English practitioners, so generally may it be traced to indulgence in that potation.

We pass over the symptoms of cirrhosis minutely given by the author, and quote from his remarks on its diagnosis.

"In the early stage of cirrhosis, the symptoms are often few, and present no distinctive, and, to common eyes, no alarming characters—so that it is only by considering the circumstances in which they arise that we are led to perceive their true significance. Slight sallowness of complexion, a dull pain or some degree of tenderness in the right hypochondrium, with occasional feverishness, in a person above the age of thirty, who has been long in the habit of drinking spirits to excess, are almost conclusive evidence of the existence of cirrhosis, even before there is any direct proof that the circulation through the liver is impeded. The symptoms, in themselves, may be slight, but knowledge of the habits of the patient enables us to regard them as tokens of organic and incurable disease. Here, as in so many other cases, it is only by knowing the causes of the disease, or the circumstances under which it usually occurs, that we become watchful of its earliest tokens, and perceive, as it were, the shadows that, in coming, it casts before it.

"When by the progress of the disease the circulation through the liver is so impeded as to cause ascites, the diag-

nosis is much more easy. The cases most difficult to distinguish from it are those in which ascites is associated with great enlargement of the spleen. It now and then happens that a man is brought into our London hospitals with great ascites, and most of the other symptoms of cirrhosis. After a time the ascites diminish, and the spleen is found enormously enlarged. The ascites may completely disappear, and the patient regain health enough for his former pursuits. I have met with three cases of this kind, but have never ascertained by dissection what the disease really is. The spleen is much enlarged, which it is not in cirrhosis, and the complexion may not be sallow, but in other respects the characters of the two diseases are almost identical."

The previous habits of the patient will afford a clue to the nature of his complaint. While peritonitis, which has some symptoms in common with cirrhosis, attacks persons of all modes of life, only the intemperate are apt to be afflicted with cirrhosis. So too of cancer; it is found in the higher classes, and in the temperate; cirrhosis is seldom seen, except among those who have suffered privations, and drunk spirits to excess.

The treatment to be useful must be early applied. The best remedies are then cupping over the region of the liver, with saline medicines, and low diet. But as hard drinkers do not bear bleeding well, the cupping must not be carried too far, or delirium tremens may supervene. When pushed as far as is deemed safe, it may be followed with advantage by a blister. Mercury and iodide of potassium should follow, the former being carried to the point of slightly touching the gums.

Inflammation of the veins of the liver is another form of hepatic disorder treated of in this volume. It may be seated in the vena portæ, or the hepatic veins, and in the trunks or the branches. A blow may excite it, or it may follow suppuration in other parts, as that which results from injuries of the brain. The author supposes that inflammation of the hepatic veins is of more frequent occurrence than is generally believed, being overlooked in post mortem dissections.

The gall-bladder and ducts are subject to various forms of inflammation, styled by our author catarrhal, suppurative, croupal, and ulcerative. These several modifications depend upon the causes which excite the inflammation. The first, he thinks, is not uncommon. It is a mild disease, attended with feverishness, slight pain in the region of the liver, and, if many of the ducts become closed by thickening of their coats, or by the viscid secretion, with slight enlargement of the liver and jaundice. Many of the cases of simple jaundice coming on in healthy persons, and attended with very little pain and fever he ascribes to catarrhal inflammation of the hepatic ducts.

Suppurative inflammation is of a severer form. It sometimes ends in death, cases of which the author reports. Permanent obstruction in the cystic duct is one of the most frequent causes of it.

Croupal inflammation is rare, while ulceration of the gall-bladder is the most common of all the forms of inflammation yet considered. It has been found among the morbid appearances of remittent fever; often it is produced by gall-stones, and seems especially liable to occur in persons in whom the gall-bladder has suffered from former disease. It may lead to various results; as to a discharge of the contents of the gall-bladder into the cavity of the peritoneum, from sloughing of the coats; or to a similar discharge into the duodenum or colon, adhesions having been previously established between them and the gall-bladder; or to abscesses of the liver, as was shown in the chapter on that subject.

The treatment in all forms of hepatic inflammation is materially the same. Early local depletion is the main remedy, and is of the greatest importance. The symptoms, though slight in the beginning, may end in fatal closure of the ducts of the liver, and should be met in the first stage. Our author's words on this point convey a true idea of the importance of a correct diagnosis of the affection and opportune treatment. He says—

"In such cases, our end must be, not so much to relieve the present symptoms, which are often slight, as to prevent those changes of structure, which, slowly it may be, but inevitably, and with much suffering, destroy life. How infinitely valuable, then, is that insight which enables us to see the danger before it is revealed to other eyes, and when alone we can effectually guard against it. This insight we can derive only from knowledge of the circumstances under which these forms of disease occur; knowledge, which gives meaning to symptoms, otherwise vague, and perhaps so slight as to be scarcely regarded."

To local depletion must be added appropriate diet, and the judicious use of mercury. Soda is mentioned as a remedy of value in such cases, and Dr. Budd thinks favorably of it. He also speaks well of taraxacum, as possessing the power of modifying the qualities of the bile.

We come now to another class of hepatic disorders—those which result from *faulty nutrition* of the liver, or *faulty secretion;* among which are enumerated softening of the liver, destruction of the hepatic cells, suppressed secretion of bile, and fatal jaundice.

These affections are less understood than the inflammatory diseases of the liver. They may be divided into two principal groups, the character of one of which is suspension of the secretion of bile; of the other, that the hepatic cells separate from the blood some abnormal matter, which is retained in the liver, adding to its size, and changing its texture and appearance. Fatal jaundice attends this state of the liver. No obstruction to the flow of bile exists, but the structure of the liver is changed; its size is diminished, it is "soft, or flabby, and of a light yellow, or brownish-yellow, or crimson-orange, or some kindred tint."

This condition of the liver may arise from various causes; as poison, malignant fevers, or even mental distress; it is generally soon followed by delirium, or stupor, passing into coma or convulsions. Still it is not necessarily fatal, even after the patient has reached the borders of this state; although it sometimes proves so from mere exhaustion, without delirium, coma,

or convulsions. Having cited numerous cases illustrative of all the shades of this affection, the author concludes with this passage:

"I have brought together from different sources the cases related in this chapter, for the sake of showing that the secretion of bile may be suppressed, and the secreting substance of the liver be more or less disorganized, in various circumstances, and without the occurrence of any process that we are warranted in designating *inflammation.* It would seem that this suspension of the secreting process and disorganization of the liver, may result from powerful and depressing emotions; but that it is far more frequently produced by some poison, introduced from without, or generated in the body by faulty assimilation or digestion. It appears, too, that various poisons, —pus, the poison of serpents, perhaps the poison of some forms of fever, and various others,—may alike stop the secretion of the liver, and lead to the same kind of disorganization of its structure, while their other effects on the system are very different. It is probable, too, that in some cases, as in those last related, the disorganization is produced slowly and gradually, and so *without shock;* while in the more terrible forms of disease, of which instances were before given, the disorganization is sudden and rapid. These circumstances serve to explain the different characters of the illness that attended the suppression of bile in the different cases related. They were many of them cases of essentially different diseases, and having merely this one effect, and the consequences of this effect, in common."

The means of distinguishing jaundice that results from suppressed secretion, from jaundice produced by temporary closure of the ducts, is only easy where the affection follows a powerful emotion, or occurs in the course of purulent phlebitis, or in consequence of some known poisoning, or in several members of a family at the same time, or in quick succession. "In all these instances, knowledge of the cause of the disease, or of some peculiar circumstances under which it may have arisen, gives significance to symptoms that would otherwise be vague and ambiguous." Still, where we have no insight of this kind, and where the cause is unknown to us, we have an important guide in the circumstance that this form of

hepatic disease is almost always attended by *diminution in the size of the liver*, while in most other cases of jaundice that organ is enlarged.

Active purging is the treatment which the author considers best adapted to this form of liver complaint; but until more is known respecting its causes, and while the symptoms are so obscure, we are not likely to have satisfactory proofs of the good or ill effects of any particular plans.

In the succeeding section we have described, Fatty degeneration of the liver—Partial deposit of fat in that viscus—Waxy liver—and the appearances caused by deficiency of fat in the liver. Of these, fatty degeneration is the most common. Fat is natural to the liver, but in the healthy state of the organ the quantity is very small. In the fatty liver it is enormously increased. The hepatic cells are gorged with large globules, and the quantity of oil thus accumulated in a liver may equal in weight, and more than equal in bulk all the other elements of the liver put together. The author relates that Vauquelin obtained from a portion of fatty liver, by boiling, as much as 45 parts of oil in 100 of liver. Nearly half the liver, in weight, consisted of uncombined oil. The fatty liver is thus clearly described:

"A liver that has undergone the fatty degeneration, may be little altered in shape, but it is larger, and paler, and softer, and more greasy, than natural. These changes in its sensible qualities depend chiefly, if not solely, on the interstitial deposit of the oil-globules, and their degree may give us some estimate of the quantity of oil the liver contains. When this is very large, the liver is large in proportion, sometimes twice its natural size, and is generally somewhat altered in shape, being thicker than natural, and having its edges blunter or more rounded. The capsule of the liver is stretched and smooth, and when divided its edges recede. The tissue of the liver is pale, and, generally, throughout of a soft buff color, dotted with brown or red. The brown or red dots mark the centres of the lobules, which are usually large and distinct, and are buff-colored near their margins. The liver is very soft, and greases the hands, or the scalpel, like common fat."

The liver undergoes this degeneration in very different states of the body. Thus it occurs in persons who lead indolent lives, and are at the same time gross feeders, and who from these circumstances grow fat. But it is often found in persons dead of phthisis, and of emaciated frames. Its frequency in consumptions was first pointed out by Louis in his celebrated work on phthisis. He found it present in 40 cases out of 120 of that disease. It seems to be four times as frequent in women as in men. Dr. Home found the liver fatty in ten, and *waxy* in five cases, out of sixty-five persons who died of phthisis; and these fifteen instances occurred, with one exception, in females. Fatty degeneration of the liver in such degree as to be at once recognised is almost peculiar to pulmonary consumption, for while it may be detected by the microscope, or by the practised eye in other diseases, it is only in phthisis that it is easily distinguished by sight as a general rule. But this is not invariable; for in some cases of cancerous ulceration the same condition of the liver is presented, and also now and then in ulceration of the large intestine from chronic dysentery. What is the cause of this degeneration of the liver? Baron Larrey advanced the opinion some years ago, that it results from solution of the fat previously laid up in the body, in a manner analogous to what takes place in geese treated so as to develop their livers, according to the following method copied from him:

"To procure the large livers of geese, for the making of patties, fatted birds are confined in close cages, and then exposed to a graduated heat, being kept at the same time entirely without food, even without water. They become feverish, the fat undergoes a kind of fusion, and the liver grows enormously large. The liver is considered to be in the desired state, when the animal is *extremely wasted*, and the fever increases."

The author inclines to this opinion. The liver, upon this supposition, cannot be considered as essentially the seat of the disease, any more than diabetes can be considered a disease of the kidneys. These organs merely eliminate the ex-

cess of fat and saccharine matter contained in the blood. The latter substance being soluble passes out of the system, leaving the kidneys unaltered; while the oil-globules are pent up in the liver, adding to its size, and altering its texture.

Another question is presented in view of the details given on this subject. Why does the liver become fatty so much more frequently in women affected with phthisis, than in men? One reason may be, that women, as a general rule, are fatter than men, but it must be confessed that the question cannot be satisfactorily answered.

In some cases the fatty condition of the liver is not general, but confined to a small portion. The author mentions one where a deposit of fat as large as a walnut was found, the rest of the liver being quite sound. These cases depend upon local causes affecting the nutrition of a portion of the liver, and not upon a general cause such as phthisis.

This degeneration of the liver in consumptives may be recognised during the life of the patient; but as it causes but little inconvenience in itself, and leads neither to inflammation nor any other secondary mischief, it is not an object of treatment, especially as the disease with which it is associated is inevitably fatal. When it is the effect of gross feeding, the excess of fat will disappear from the liver, as from other parts, on the individual adopting an abstemious mode of life.

A scrofulous enlargement of the liver, to which the next section is devoted, is sometimes met with in persons much wasted by scrofula of the glands or bones, but the matter deposited is different. A similar enlargement is stated by Rokitansky to be produced occasionally by prolonged attacks of ague; but such cases will generally be found complicated with a scrofulous taint. But now and then enlargement takes place without our being able to trace it to scrofula, ague, syphilis, or any of the circumstances to which it is ascribed.

The treatment in this affection of the liver must have reference to the cause. Diet, clothing, sea-air and bathing promise most in cases where it is referrible to scrofula. In such cases the author also thinks well of frictions of iodine oint-

ment long continued. The original malady being faulty assimilation, if we can remedy this, the author thinks we shall probably, in most cases, if not in all, remedy the unnatural condition of the liver, and other secondary affections. At all events, as warned by Dr. Graves, we are not to give up cases of enlargement of the liver too hastily, since sometimes the most unpromising terminate in recovery.

Excessive and defective secretion of bile, and *unhealthy states of the bile* are the subjects next discussed.

The quantity of bile secreted varies with the state and circumstances of the individual, and cannot be considered morbid unless secondary disorders are induced by it. In the slighter degrees of this bilious disorder, there is purging of bilious matter, scalding of the rectum, with slight sickness, bitter taste, and a foul tongue, but without much fever. This state of things is readily corrected by an emetic or purgative. In more severe forms of the ailment, fever, pain and tenderness in the region of the liver, and an altered bilous complexion are superadded symptoms. The illness bears a close resemblance to a slight attack of bilious fever. Bleeding may be embraced in the plant of treatment in such cases, and with calomel and saline purgatives will soon correct the disorder. Our author remarks judiciously—

"The readiness with which these attacks are removed, often makes people regard them lightly; but they are important, as evidence of disorders, which, aggravated by time and by continuance in the habits under which they have arisen, may end in some organic disease, or in the total failure of those assimilating processes on which nutrition depends. During the attacks, signal relief is produced by a dose of calomel, or blue pill, followed by saline purgatives. If there should be pain, or tenderness, in the region of the liver, and the patient can well bear it, blood should be taken away by leeches, or by cupping. These measures are generally sufficient for the time, but they do not strike at the root of the evil. Exemption from future attacks, and from the manifold and greater evils to which these disorders may lead as age advances, can only be procured by a change of habits. One of our objects in directing this should be to increase the amount of oxygen

inspired, and thus to consume in respiration, or burn off, materials that would otherwise be left for the liver to excrete. The means most efficacious for this purpose, are sea-voyages, riding, or other exercise in the open air, well-ventilated rooms, early rising, the cold or shower-bath, &c. Too much indulgence in sleep, which so much reduces the activity of both respiration and circulation, must be especially injurious, more particularly in rooms that are ill-ventilated, as most bed-rooms are."

It is of equal importance to reduce the diet of the individual in such cases. Butter, fat animal food, and especially spirituous drinks ought to be proscribed.

The other form of this disorder—*diminished secretion of bile*—is marked by indigestion, in its mildest stage, and when more decided is attended by symptoms of jaundice. In both the treatment is the same, and is that which American physicians have long, and, no doubt, too indiscriminately resorted to in all affections of the liver—mercurial cathartics.

The bile may not only be morbid in quantity, but doubtless also altered in quality, although we are not possessed of much knowledge furnished by analyses of human bile. Chemistry has done little more than teach us that the hepatic secretion is sometimes acid; that at others it contains urea; that some medicines pass off along with it; and that some of its constituents are subject to a change in quality. The latter are recognised by the senses, the bile being too light-colored, or too dark-colored, too thin, or too viscid, and, now and then, containing sparkling scales of cholesterine. This ingredient is apt to lead to the formation of *gall-stones*, to which the next section is devoted.

"The shape and size, and appearance of gall-stones varies very much, according to the circumstances under which they are formed.

"When there is only one gall-stone in the bladder, it may grow to the size of a hen's egg, but is seldom found so large. While it remains small, and can move freely in the bladder, it is generally spherical, but when it becomes so large that it is girthed by the bladder, or can no longer roll freely in it, it

grows most at the ends which are not subject to pressure, and so becomes somewhat egg-shaped.

"Large solitary gall-stones, with the exception of their nuclei, are composed almost entirely of cholesterine, and are, consequently, white and crystalline. They have a soapy feel, and when placed in the flame of a candle, readily melt, and burn with a bright flame. Sometimes the cholesterine is deposited quite pure, and the gall-stone is then quite white, like a ball of camphor, or of white marble. The surface is generally a little rough and dull, but it readily takes a fine polish. When these round or oval stones are sawn through the centre, they are seen to be crystallized in rays, which converge towards the nucleus.

"A circumstance that seems almost necessary to the formation of gall-stones, is the presence of a small mass of solid biliary matter, or inspissated bile cemented by mucus, or some other substance, about which the cholesterine may collect. Almost all gall-stones have a nucleus, not of cholesterine, which must of course, have existed before them. An excess of cholesterine is not, of itself, sufficient for the formation of gall-stones."

But other elements than biliary occasionally enter into the composition of gall-stones. Our author speaks of *chalky concretions*, composed chiefly of the phosphate or carbonate of lime, as being found in the ducts, gall-bladder, or substance of the liver. He quotes a case from Andral, in which three small calculi of phosphate of lime in the gall-bladder of a man 50 years of age led to his death. Other cases are on record, and Dr. Budd states that in the livers of sheep such chalky concretions are by no means rare.

As in fatty degeneration of the liver, females appear to be the greatest sufferers here. It is the experience of Dr. Prout, whose admirable work on the stomach, we noticed a year ago, that four or five cases of gall-stones occur in women for one in men, and the observation of our author has brought him to the same conclusion. These bodies produce various effects upon the bladder and ducts. One of these is closure of the cystic duct, by which the office of the gall-bladder is destroyed, and indigestion brought about; but as the future passage of gall-stones is thereby prevented, the author thinks

the patient may gain by the obstruction. The subject is continued in the following passage which, notwithstanding its length, we are induced, on account of its great interest, to extract:

"If the gall-stone pass through the cystic duct, it generally passes also through the common duct, which is larger and straighter than the cystic duct. If it pass slowly, and be large enough completely to block up the duct and prevent the flow of bile into the intestine, it soon causes jaundice and dilatation of the gall-ducts behind, and of the gall-bladder. The distension of the gall-bladder may be so rapid, and so great, that, on some trifling effort, as that of coughing or of vomiting it may burst, especially if its coats were previously diseased,—and its contents be poured into the cavity of the peritoneum. Several instances of this kind have been recorded. The gall-stone may also become *fastened* in the common duct, and may lead to permanent closure of the duct below it, by adhesion, and consequently, to permanent jaundice and all the other evils which obliteration of the common duct occasions. Sometimes, a large gall-stone gets permanently lodged in the lower end of the common duct, without completely closing it. That part of the duct which embraces the stone, participates in the dilatation of the ducts behind, and bile still passes round the stone into the intestine. This, however, can scarcely happen without much impeding the flow of this fluid, and leading to occasional jaundice, and, in the end, to great dilatation of the hepatic gall-ducts, and greater or less destruction of the secreting element of the liver. But, as before remarked, a gall-stone seldom rests long in the common duct. After a time, which seldom extends beyond a few days, it passes into the intestine. One is occasionally surprised, considering the natural size of the common duct, at the large size of a gall-stone, which has passed through the ducts, without ulceration, into the intestine. A stone, as large as an almond, or larger, may escape in this way. The circumstance shows to what an extent the ducts may be dilated by a constant, and gradual increasing, fluid pressure. When the ducts have been much dilated, they return to their natural size very slowly. The common duct has been found as large as the finger, or even larger, a considerable time after the passage of the stone by which its dilatation was caused."

Inflammation may be excited in the coats of the ducts by the lodgment of gall-stones. At other times, fatty degeneration of the coats seems to be the effect of their mechanical irritation. Again, ulceration of the bladder and ducts results from their presence; and this, in turn, may lead to hepatic abscess, though such a result is probably rare. But long as is this train of evils, flowing from these deposits in the liver, we are not to conclude that their existence is invariably marked by such suffering. On the contrary, according to our author—

"Gall-stones may exist in the *bladder* a long time, without giving rise to any symptoms that are noticed. They are frequently found, and sometimes in great numbers, in persons who during life had no ailment referrible to the liver that could lead one even to suspect them. While stationary in the bladder they give rise to no symptoms, unless they are so large, or so numerous, as to distend it, or unless there be at the same time ulceration or inflammation of its coats. In such cases, they cause a sense of weight or uneasiness in the region of the gall-bladder, or pain in that part, which is felt chiefly after meals, and which sometimes extends through to the right shoulder-blade, or even to the right arm. The pain or uneasiness is increased by a deep breath, or by certain movements of the body.

"The fact that gall-stones often exist without causing pain is explained by the circumstance that the gall-bladder does not contract on the stones, and is perhaps seldom completely emptied, and that gall-stones are so light that they are suspended in bile, and in consequence exert no pressure on the coats of the bladder by reason of their *weight.* It may also be owing in part to the little sensibility to pain which the gall-bladder has when not inflamed."

The next chapter treats of *cancer*, and *hydatids* of the liver, and is full of instruction. The first is necessarily fatal; the treatment can only be palliative. Hydatids are sometimes cured by an effort of the constitution, which is made in one of two ways. The first is by a secretion of a thick matter, like putty, within the sac, by which the tumor is made to grow less, and ceases to disturb the system.

"The second mode of termination—the opening of the tumor and the discharge of its contents through the walls of the belly, or through the intestinal canal, or through the lung—is often followed by obliteration of the sac, disappearance of the tumor, and complete recovery; but it is not unattended with danger. As before remarked, by the admission of air, or otherwise, suppurative inflammation may be set up within the sac, the discharge of the natural contents of the sac may be followed at the end of some days by the discharge of pus, which may continue so as to exhaust the strength of the patient. The probability of a favorable result from such an opening is greater the younger the patient and the more recent the tumor—or rather, the greater the elasticity of the walls of the sac. It is the elasticity of the walls of the sac that closes the cavity as its contents escape and prevents any subsequent mischief."

Common salt, and iodide of potassium are mentioned by our author as articles supposed to have the power of arresting the growth of hydatid tumors.

Jaundice is the subject of the concluding chapter in this interesting and instructive volume. This, the author remarks, is a mere symptom which may occur in most diseases of the liver, but then it is a symptom so striking, and an element of so much moment in any case in which it may happen, that a separate consideration of it is required. It may be produced in two ways—by an impediment of the flow of bile into the bowel, and its absorption; or by defective secretion on the part of the liver, the bile not being separated from the blood.

In the greater number of cases the cause is to be found in the latter condition. Often where death has resulted from jaundice no bile has been discovered in the gall-bladder and ducts, showing that the secretion had become null When this is the case, the bile is eliminated in most of the secretory fluids. It passes off with the urine, with the perspirable matter, the tears, the milk, the mucus and serum of the several passages and cavities. The skin, next to the liver, becomes the most deeply jaundiced, which the author thus accounts for:

"The deep jaundice of the skin doubtless depends on the biliary matter being separated from the blood by the secreting cells of the skin, as it is naturally by those of the liver. The skin and the liver are allied in their office:—both excreting superabundant fatty matter. Many of the constitutional states that favor the secretion of the one, favor that of the other. The skin becomes, thus, in some measure, an index of the manner in which the functions of the liver are performed. Horse-exercise, which clears the skin, clears the liver; mercury, our most effective cholagogue, is excreted in large quantity by the skin."

For the most part, jaundice is attended by bad digestion, impoverished blood, and emaciation; but the author quotes cases from Graves and Stokes in which, after the onset of the disease, "the derangement of the digestive organs subsided, the appetite returned, the bowels became regular, although the stools did not contain a particle of bile, and nutrition continued unimpaired, although the disease had in one case lasted for eight months, and in the other for two years." These facts teach us, that we have attached too much importance to the bile as an agent in digestion; they prove, at least, that a soluble state of the bowels, and adequate nutrition may be maintained when this secretion is deficient, if not entirely shut out from the bowels. The author mentions a man "who was pretty well nourished after four years of jaundice, during which the flow of bile into the intestine seemed to have been completely prevented."

In the worst cases of jaundice, delirium and coma are prominent and fatal symptoms. They depend, says the author, not merely "on the secretion of bile being suspended, but on the poisoned state of the blood, or on the rapid disorganization of the liver, by which the suppression of bile is caused."

The causes of jaundice are very various; obstruction in the gall-ducts, as by a gall-stone passing, cancerous disease of the liver, or inflammation from drink, constipation, pregnancy, spasm of the gall-ducts, are among them. But in the greater number of cases the affection results from the secretion of

bile being suppressed or deficient, the causes of which again are various; but we shall not stop to recite them.

"Since, then, jaundice may arise from such various causes, and be a symptom in diseases so different, it is clear that we cannot foretell its issue in any given case, or have well-grounded confidence in our treatment, unless we can pass from the jaundice to the particular disease of the liver on which it depends, or to the particular cause by which it is produced."

In many cases, this is done without difficulty, the symptoms present at the time, or the previous history pointing to the precise condition of the liver of which the jaundice is symptomatic. In respect to the treatment, the author proposes nothing new.

An exceedingly interesting chapter on the *liver-fluke* in sheep is appended to the volume, this parasite being the cause of the *rot* in that animal. Modern researches show that it is also an occasional resident in the human liver, though so rarely that Dr. Budd is not willing to regard it as a cause of disease.

Here we close our extended notice of this work, and in doing so we feel no fear that our readers will charge us with having made it too long. It is far the most valuable contribution made in latter years to our knowledge concerning liver diseases, and will not be esteemed the less so, because it abates somewhat the universality of such disorders. This, undoubtedly, will be its effect. It gives positive information touching the morbid states of the liver, about which there has been so much speculation, and when we have learned what are the reliable signs of disease in it, we shall not be so prone to make it the fountain of every vague disorder.

ART. IV.—*Phrenology Examined.* By P. FLOURENS, Member of the French Academy, Perpetual Secretary of the Royal Academy of Sciences, (Institute of France), Member of the Royal Societies of London and Edinburg, of the Royal Academy of Sciences of Stockholm, of Munich, and of Turin, &c. &c. Professor of Comparative Physiology at the Natural History Museum at Paris. Translated from the Second Edition of 1845, by CHARLES DE LUCENA MEIGS, M. D., Memb. Amer. Phil. Soc., &c. &c. Philadelphia: Hogan & Thompson. 1846. (16mo. pp. 144.)

Phrenology, having long bestrode the earth "like a Colossus," has, at last, met an assailant in one of the first anatomists and physiologists of the age. The foeman is worthy of the steel of Gall himself, if he could return from the grave. M. Flourens is distinguished even among the savans of the French metropolis, and he denounces phrenology as "a bad philosophy." We are phrenologists; but we desire the truth. If we have been confiding in an unsound doctrine, let us be made to see our error, and we shall renounce it. It is but fair, at least, to M. Flourens, as it is due to truth, that his objections should be heard and pondered.

The ground-work of his examination is Gall's great work on the Anatomy and Physiology of the nervous system, the fundamental propositions of which are, that the understanding resides exclusively in the brain, and that each particular faculty of the understanding is provided in the brain with an organ proper to itself. "Now," says M. F., "of these two propositions, there is certainly nothing new in the first one, and perhaps nothing true in the second one."

This is strong ground, but, as to the first proposition, it is unquestionably true. It was no discovery of the great phrenologist, that the brain is the organ of the mind; such a claim was never set up by him. This being settled, then, we go on at once to the arguments in support of the second proposition; namely, that there is nothing new in the science of organology and we shall give the arguments in the author's own language. He states the phrenological doctrines thus:

"Gall's philosophy consists wholly in the substitution of *multiplicity* for *unity*. In the place of one general and single brain, he substitutes a number of small brains: instead of one general sole understanding, he substitutes several individual understandings. These pretended *individual understandings* are the *faculties*.

"Now, Gall admits the existence of twenty-seven of these faculties, each one of them (since each one is a peculiar understanding) endowed with its perceptive faculty, its memory, its judgment, its imagination, &c.

"Hence, there are twenty seven perceptive faculties, twenty-seven memories, twenty-seven judgments, twenty-seven imaginations, &c.

"Hence there can be nought but the faculties; and, according to Gall, these faculties are so distinct, that he attributes to each particular one a separate organ. He divides the understanding into little understandings."

Upon which Flourens remarks—

"Under the title of *fundamental faculties*, Gall confounds all things together—the passions, the instinct, the intellectual faculties. These faculties, which are at the basis of his whole philosophy, he knows not even how to denominate them. He calls them instincts, inclinations, senses, memories, &c. There is a memory or sense of things, a memory or sense of persons, &c. He confounds the instinct that leads certain animals to live in elevated regions with pride, which is a moral sentiment in man; the carnivorous instinct with courage; he believes that conscience, (which is the soul judging itself,) is nothing but a modification of a particular sense, the sense of benevolence, &c.

"The hesitation of his mind is visible every where.

"'I leave it to the reader,' says he, 'to decide whether the fundamental faculty to which this penchant relates, should be denominated senses of elevation, self-esteem,' &c,

"'To speak correctly,' continues he, 'firmness is neither a penchant nor a faculty; it is a mode-of-being, which gives to a man a distinctive quality, which is called character.'

"Finally, he writes the following paragraph, perhaps the most singular one that he ever wrote, for it shows in the clearest manner how little confidence he had in his own psycology.

"'If we are materialists because we do not admit the existence of a unit-faculty of the soul, but recognise several pri-

mitive faculties, we ask whether the ordinary division of the faculties of the soul into understanding, will, attention, memory, judgment, imagination, and affections and passions, expresses nothing more than a primitive unit-faculty? If it be asserted that all these faculties are merely modifications of a sole and same faculty, what can hinder us from making the same assertion as to the faculties whose existence we do admit.'

"To be sure, nothing prevents you. Or rather every thing constrains you to do so. There is therefore one sole faculty, of which all the other faculties are but moods. You return then to the common philosophy, and consequently you no longer possess a peculiar philosophy.

"The problem proposed by Gall is at the same time physiological, psycological, and anatomical.

"In our first article an account has been given of Gall's *physiology*, and it has been shown to be generally disproved by direct experiment. In the present one his *psycology* has been examined, and it is confuted by the consciousness (*le sens intime*). It only remains for us now to examine his *analomy*."

The estimate put by Flourens upon the anatomy of Gall is not very high. He says:

"The truth is: Gall never had any settled opinion upon what he called the organs of the brain; he never saw those *organs*, and he imagined them for the use of his *faculties*. He did what so many others have done. He commenced with imagining a hypothesis, and then he imagined an anatomy to suit his hypothesis.

"But as to the pretended *organs of the brain*, are they really situated at the surface of the brain, as Gall asserts? In plain terms, is the surface of the brain the only active part of the organ? Here is a physiological experiment that shows how very much mistaken Gall is.

"You can slice off a considerable portion of an animal's brain, either in front, behind, on one side, or on the top, without his losing any one of his faculties.

"The animal may, therefore, lose all that Gall calls surface of the brain, without losing any of his faculties. Therefore it cannot be that the organs of the faculties reside at the *surface of the brain*.

"And comparative anatomy is not less opposite to Gall's

opinions than is direct experiment itself. I shall not follow him here in the detail of his localizations. How could these localizations have any meaning? He does not even know whether an organ is a *fascicle of fibres*, or a *fibre*.

"For example; he places what he calls the instinct of propagation in the cerebellum, and what he calls the *instinct of the love of offspring*, in the posterior cerebral lobes; and he looks upon these two localizations as the very surest in his book.

"'I should wish,' says he, 'that all young naturalists might begin their researches with the study of these two organs. They are both easily to be recognised,' &c.

"What! The cerebellum, so different in its structure from the great brain, is the cerebellum, like the brain, to be considered an organ of instinct? And what is more, is it to be regarded as the organ of a single instinct only, while the brain shall have twenty-six of them?

"I have already said that the cerebellum is the seat of the principle that presides over the locomotion of the animal, and that it is not the seat of any instinct.

"Gall places the love of offspring in the posterior lobes of the brain. Now, the love of offspring, and especially maternal love, is every where to be found among the superior animals; it is found in all the mammifera, in all the birds. The posterior lobes of the brain, therefore, ought to be found in all these beings. Not at all: the posterior lobes are wanting in most of the mammifera; they are wanting in all the birds.

"Gall locates the faculties that are common to both man and animals, in the posterior part of the brain; in the anterior part he places those that are peculiar to man alone. According to this plan, the most *persistent* portion of the brain will be the posterior portion, and the least persistent the anterior portion. But the inverse of the proposition holds. The parts that are most frequently wanting are the *posterior parts*, and those that are most invariably present are the *anterior parts*."

If, he says, from the brain, we pass on to consider the cranium, "all the foregoing is found to be of still greater force." The cranium, Gall himself admitted, represents the superficial configuration of the brain but very imperfectly. The author wonders that, in view of this, Gall should have ventured to "inscribe his twenty-seven faculties upon the

skulls." He quotes a cruel remark from Vimont, an able anatomist and decided phrenologist, that "Gall's work is fitter to lead into error than to give a just idea of the seats of the organs." Still, he adds, "this same M. Vimont inscribes twenty-nine names on the skull of a goose."

The author states his own views respecting the functions of the brain in the following passage:

"The brain, en masse, the *encephalon*, is then a multiple organ; and this multiple organ consists of four particular organs: the cerebellum, the seat of the principle that regulates the movements of locomotion; the tubercula quadrigemina, seats of the principle that regulates the sense of sight; the medulla oblongata, in which resides the principle that determines the respiratory motions; and the brain proper, the seat, and the exclusive seat of the intelligence.

"Therefore, when the phrenologists promiscuously place the intellectual and moral faculties in the brain, considered en masse, they deceive themselves. Neither the cerebellum, the quadrigeminal tubercles, nor the medulla oblongata can be regarded as seats of these faculties. All these faculties dwell solely in the brain, properly so called, or the hemispheres.

"The question as to the precise seat of the intelligence, has undergone a great change since the time of Gall. Gall believed that the intelligence was seated indifferently in the whole encephalon, and it has been proved that it resides only in the hemispheres.

"Further, it is not the encephalon taken en masse that is developed in the ratio of the intelligence of the creature, but the hemispheres. The mammifera are the animals most highly endowed with intelligence; they have, other things being equal, the most voluminous hemispheres. Birds are the animals most highly endowed with power of motion; their cerebellum is, other things being equal, the largest. Reptiles are the most torpid and apathetic of animals; they have the smallest brain, &c.

"Every thing concurs then to prove, that the encephalon, in mass, is a multiple organ with multiple functions, consisting of different parts, of which some are destined to subserve the locomotive motions, others to motions of the respiration, &c., while one single one, the brain proper, is designed for the purposes of the intellection.

"This being conceded, it is evident that the entire brain cannot be divided, as the phrenologists divide it, into a number of small organs, each of which is the seat of a distinct intellectual faculty; for the entire brain does not serve the purposes of what is called the intelligence. The hemispheres alone are the seats of the intellectual power; and consequently, the question as to whether the organ, the seat of the intelligence may be divided into several distinct organs, is a question relative solely to the uses and powers of the hemispheres."

He adds—

"It has been shown by my late experiments, that we may cut away, either in front, or behind, or above, or on one side, a very considerable slice of the hemisphere of the brain, without destroying the intelligence. Hence it appears, that quite a restricted portion of the hemispheres may suffice for the purposes of intellection in an animal.

"On the other hand, in proportion as these reductions by slicing away the hemispheres are continued, the intelligence becomes enfeebled, and grows gradually less; and certain limits being passed, is wholly extinguished. Hence it appears that the cerebral hemispheres concur, by their whole mass, in the full and entire exercise of the intelligence.

"In fine, as soon as one sensation is lost, all sensation is lost; when one faculty disappears, all the faculties disappear. There are not, therefore, different seats for the different faculties, nor for the different sensations. The faculty of feeling, of judging, of willing any thing, resides in the same place as the faculty of feeling, judging, or willing any other thing, and consequently this faculty, essentially a unit, resides essentially in a single organ."

These objections are weighty, but do not appear to us fatal to phrenology. They, who are doing most to shake public faith in the science, are the phrenologists themselves. Years ago we read the works of Gall, and were told that his chart of the cranium was a true mapping of the brain. Spurzheim afterwards made certain modifications in his chart, introducing new organs, and changing the seats of old ones; and then we were assured that the truth of the cranioscopy was no longer a matter of doubt. It was declared a *certain* science; more exact

than chemistry. Vimont now warns us against the fallacies of Gall's chart, assuring us, that it is better calculated to mislead than to give a just idea of the seats of the organs. And worse than all, the *neurologists* have been overhauling the system, and have so changed its aspect, that Gall would scarcely recognise it as the same. Few organs have escaped the revision of these philosophers, or been allowed to stand where they were first set down; while the number has swelled from twenty-seven to more than two hundred, and is still increasing. They cover, now, not only the front, apex, and rear of the head, but the face, and the neck, and are so crowded that, as remarket by Leuret of the mapping on the head of a goose, "it would be a marvellous thing to be able to write their names upon the brain, and a greater marvel to discover them." Amid these revolutions, following each other in such quick succession, faith is staggered, and we know not what to believe. Doubtless, much error has been mixed up with the truth, and the system is still imperfect. New charts must be made, as multiplied observations show the mistakes of former phrenologists. But we cannot agree with our eminent friend, the translator, "that Gall was wholly mistaken in his views of the human mind; and of course, that all the cranioscopists, mesmerizers, and diviners who have followed his track, or risen upon the basis of his opinions, are equally in error.' Along with the tares there is good grain coming to maturity—not, perhaps, the abundant harvest to which we once looked forward—but still beautiful and promising plants which will prove a blessing to the nations.

ART. V.—*Twenty-Fifth Annual Report of the Bloomingdale Asylum for the Insane.* For the year 1845. By PLINY EARLE, M. D., Physician to the Asylum.

Report of the Pennsylvania Hospital for the Insane. For the year 1845. By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution.

In these reports we find the usual amount of statistics, showing that good men are still successfully laboring to ameliorate the condition of the insane. Dr. Earle states that at the Bloomingdale Asylum—

"The year was commenced with one hundred and four patients, of whom fifty-four were males and fifty females. Since that time, one hundred and thirty-eight cases, of which seventy-one were males and sixty-seven females, have been admitted, making the whole number of cases under treatment during the year two hundred and forty-two, of which one hundred and twenty-five were males and one hundred and seventeen females.

"One hundred and thirteen cases,—fifty-eight males and fifty-five females,—have been discharged. Seven males and five females have died, leaving now in the Asylum one hundred and seventeen patients, of whom sixty are males and fifty-seven females.

"Of the cases discharged, sixty-one were cured, twelve much improved, twenty improved and twenty unimproved, being discharged at the request of their friends.

"Four of the patients who are recorded as much improved, became entirely well soon after their removal. Several others who were believed to be curable, were prematurely taken away, thus losing the advantage which might have accrued from a longer residence in the Asylum."

Among other substantial reasons why more ample provision for the insane should be made, in every part of the country, is the unquestionable fact that madness is becoming a more frequent malady among our people. The following are Dr. Earle's remarks on this subject:

"The number of patients admitted during the past year, as compared with the annual admissions for several of the pre-

eeding years, being assumed as the data upon which to found an opinion, the necessary inference is, that mental disorders are increasing. Whether the increase be in a greater ratio than that of the population of the City and its adjacent country, is a proposition which cannot easily be demonstrated. However this may be, it is an unquestionable fact, that the exciting causes of mental alienation were never, in time of peace, more active, among any people, than at the present day among the inhabitants of the United States; and particularly so in the States which, bordering on the Atlantic, were the earliest peopled by European emigrants.

"Intoxicating liquors are so cheap that the labor of a few hours will procure enough to addle the brain for a week, and prevent the healthy exercise of reason perhaps a much longer period. The avenues to wealth, place and power, are open to all: the child of the cottager thus entering into the strife of competition with the son of the most wealthy citizen. The progress of civilization and refinement, and the comparative ease with which the products of both nature and art in every quarter of the globe are here obtained, have a direct tendency to foster a luxurious life. Hence human desires and human wants are greatly multiplied, while both mind and body are exerted to the utmost power of endurance to gratify the former and supply the latter. The almost unavoidable effect of the artificial mode of living thus produced, is either a debility of the system, or an augmentation of nervous excitability, either of which facilitates the invasion of mental disease.

Art has made advances so rapid towards the annihilation of time and space, that, if life be measured by the proper standard—the number of events, circumstances and conditions, seen, felt or perceived—the amount of pleasure enjoyed and of pain endured—the people of the present generation have an existence of ten-fold longer duration than their forefathers. As if this were not enough, the mind is forced into an activity corresponding with the new era of art.—Children, before the body has acquired sufficient tone, or the brain sufficient firmness, to endure much mental exertion with impunity, are placed in schools where the intellectual faculties are unduly urged, while the physical exercise necessary to the due development of the frame is too often neglected. Under such circumstances, the head will expand, but the body cannot grow in size or vigor sufficiently to maintain 'a balance of power.'"

The age at which derangement comes on is found to be earlier in New York than in Europe. The statement of Dr. Earle on that head is given in the subjoined extract:

"Some European authors maintain that insanity prevails to a greater extent in persons between the ages of 30 and 40 years than in any other decennial period of life. It is proved, however, that in this country the first invasion of the disease is the most frequent in the decade between 20 and 30 years. This fact is corroborated by the cases in the foregoing table. Forty-two of the patients were, at the time of admission, between 21 and 30 years, inclusive, and but twenty-eight, from 31 to 40. At the time of first attack, forty-four were from 21 to 30, and but twenty-seven from 31 to 40."

The relative frequency in the two sexes is thus stated:

"Of males, the single exceed the married, exclusive of widowers, by one. On the contrary, of females, the married exceed the single by eight. Of both sexes, the number of the married is seven greater than that of the single. This does not accord with the general rule deduced from a large number of cases. Of 5,322 patients, of both sexes, received into twelve institutions, 2,777 were single, 2,120 married, and 425 (135 men and 290 women) widowed. Here the number of the single exceeds that of the married, by 657, or very nearly 31 per cent. It is generally admitted that among the insane there are more unmarried than married, and it is a current opinion that prolonged celibacy increases the tendency to mental derangement.

"The number of widowed females insane, is generally much larger than that of widowed males. It will be perceived that twice as many of the former as of the latter were received during the year, and that in the statistics from twelve asylums, the former exceed the latter more than 100 per cent."

Dr. Earle's experience is favorable to the curableness of insanity in persons advanced in years. He says:

"It is generally believed that insanity is curable in a proportion inverse to that of the ages of the patients. This may, to a certain extent, be correct, but it is probable that the rule is of far less general application than is usually supposed. By

consulting the table, it will be perceived that several of the persons who recovered, were somewhat advanced in life.'

The proportion of cures effected is reported in the annexed paragraph:

In Mania 50 per cent. were cured, in Melancholia 57 per cent., in partial Mania 25 per cent., and in Dementia 20 per cent. The number of the patients, however, is so small that it would be unsafe to make general rules from these results. Insanity is not generally susceptible of a rapid cure. The shock to the system is so great that, frequently, even if the patient be brought to the Asylum soon after the commencement of the disease, several months are requisite to restore it to its natural condition.

"There is a strong tendency in the disease, from the time of its invasion, to assume the chronic form; and if this be assumed, the case becomes more difficult of cure. The practical lesson to be learned from this fact, is the high importance of placing the patient under a judicious course of curative treatment at as early a period as possible."

To this, the three facts which Dr. Earle urges, with emphasis, ought to be added, and impressed by the profession upon the community: namely—

"1st. As a general rule, the first measure in the curative treatment of insanity, is to remove the patient from home, from acquaintances, and from all familiar scenes and associations.

"2nd. When the insane are placed under proper curative treatment in the early stages of the disease, from 75 to 90 per cent. recover.

"3rd. On the contrary, if they be not put under treatment before the disease has continued a year or more, from 15 to 20 cent. only, are cured."

We learn from Dr. Kirkbride's report, that the average number of patients in the Pennsylvania Hospital during the past year was 162, and that of these 159 were discharged—80, or one half, cured, 5 much improved, 24 improved, and only 30 stationary, 20 having died. Of the patients discharged cured, 39 were residents of the hospital not exceeding

three months; 26 between three and six months; 12 between six months and a year, and 3 for a longer period than a year.

"Of those discharged 'much improved,' one was under treatment less than three months, three between three and six months, and one for more than a year.

"Of the 'improved,' six were under care less than six months, three between three and six months, ten between six months and one year, and five for more than one year.

"Of those discharged and reported 'stationary,' eight were under care less than three months, seven between three and six months, six between six months and one year, and nine for a longer period than one year."

"Make a melancholy man fat," says old Burton, "and you effect a cure." It was found so at the Pennsylvania Hospital. Dr. K. says:

"Among the *discharges*, have been numerous cases of great interest, many whose recoveries have been very prompt, and several who have regained their health under the most discouraging circumstances. The change in appearance and great increase of weight in some of these, have been such as often to attract attention from all whose official duties brought them in contact with the patients. It has been quite common for an individual to gain twenty or thirty pounds during the period of convalescence and one patient who became perfectly well, increased sixty pounds in his weight in less than two months, a part of the time having an average gain of more than two pounds a day. When most emaciated,—weighing only eighty-seven pounds at one time,—he had a voracious appetite, ate very freely, but lost flesh constantly, and yet manifested no symptom of disease, except high mental excitement. As his insanity subsided, the nutritive functions resumed their healthful condition, and he weighed one hundred and forty-seven before he left us. In a few weeks after his discharge he paid the hospital a visit and had then reached one hundred and sixty pounds, and his acquaintances of a few months before, were quite excusable for not recognising in his portly form, the skeleton-like individual who had been their associate."

The following picture from Dr. K.'s pen shows how many are the comforts that may be thrown around the prison-house of even the hopelessly insane:

"Of the patients who *remain*, are a large number of curable cases and many whose stay in the Institution will be short. Near one hundred, however, are individuals who must, in all human probability, look to this or some similar establishment as their permanent home, and the spot in gathering around which every source of comfort and happiness, they have a deeper interest than in any other. Many of them have already been residents of this hospital and of that in the City of Philadelphia, ten, twenty or thirty years; one gentleman has been under the care of the Institution more than forty-one years, and a lady more than fifty-five years. Both these last are still blessed with an abundant share of physical health, and scarce look older than they did when I first knew them, fifteen years ago. The gentleman retains all the courtesy of character, polished manner and social disposition which eminently characterised him in youth, and which still make him one of the most welcome guests at all our parties and entertainments. In the lady, although her intellect may have suffered more, the affections still flourish in all their original vigor, and she is noted for her kindness, her warmth of feeling, and tender sympathy for all who suffer, and she has Christian sources of consolation, sufficient to atone for all her afflictions. Two others have been forty-two and forty-five years in the hospital.

Art. VI.—*A Treatise on Corns, Bunions, the Diseases of the Nails, and General Management of the Feet.* By Lewis Durlacher, Surgeon Chiropodist (by special appointment) to the Queen. Philadelphia: Lea & Blanchard. 1845. (12mo. pp. 134.)

Mr. Lewis Durlacher, Surgeon Chiropodist to the Queen, feeling that the ailments of our nether extremities have been given over long enough to "ignorant and impudent empirics," has made an effort in this little volume to bring them within the pale of science. He thinks, with St. Paul, that the "head cannot say to the feet, I have no need of you," and that since they are necessary to the man, they are deserving of some

portion of his care—worthy, at least, of being kept clean. We agree most heartily with the Chiropodist, and it shall not be our fault, if his earnest voice in behalf of science, and the feet, is raised in vain. We have faith in his candor; for he claims to have discovered no infallible cures. Thus he confesses that he has not found a panacea for corns, although he has devoted nearly thirty years to the search, "and has tried various chemical and other remedial agents." Very naturally he has his fears, "that the public will be somewhat disappointed at the paucity of the remedies" he proposes. The public is taken with polypharmacy, especially if the cures are all *specifics;* or else runs to the other extreme, and takes up with Homœopathy, or the *no* remedy system. And for the reason that he shuns both extremes, Mr. Durlacher stands many chances of failing with the public. But our purpose was not to indulge in such remarks as these, but to give some account of his book.

It opens with a preface, which is followed by an introduction, and in this the author goes into some learned disquisitions on the structure of the skin, referring those who are curious respecting the literature of corns, warts, &c., to the works of Hippocrates, Celsus, Scribonius Largus, Oribasius, Octavius, Horatianus, Aetius, Actuarius, Nonnus, Avicenna, Haley Abbas, Phases, and Alsaharavius. Our curiosity we confess is satisfied with Mr. Durlacher's treatise; others may dive into this sea of learning if they have a fancy for it.

Having finished his preface and introduction the body of the treatise follows, which is divided into thirteen chapters. These treat of the cause and growth of corns; hard corns; callosities; soft corns; festered corns; neuro-vascular corns; vascular excresence; bunions; nails and their diseases; chilblains; the management of the feet.

Of the manner in which the author treats these several topics, we cannot convey so just an idea by any other method, as we shall do by a few extracts. It will be seen that he gives dignity to his subject, and that he is entirely master of it. He has described the various kinds of corns,

and comes to lay down the treatment for the several varieties, when he proceeds with the following description:

"The treatment for the common induration is exceedingly simple. It requires only to be carefully removed by scraping, or cut off with a small instrument made like a scalpel, and afterwards covered with any mild gum or soap plaster.

"Those corns which are formed on the projecting points require to be more carefully attended to, and should be extracted by dissecting round them between the sac and the corn, following its form until the whole of it is detached, avoiding injuring the sensitive skin beneath.

"In cases where the corn is of a conical shape, while dissecting it out, the instrument should be inclined so much inwards that the point shall closely follow the diminishing circumference of the corn to its apex.

"The corn which is situated at the outer edge of the nail, and is imbedded in the semilunar pellicle, demands great dexterity in its removal, as it is very thin and deeply seated, without any surrounding thickening.

"In operating on corns growing under the great toe-nail, the first thing to be done is the removal of as much of the nail as is loose, which can be effected with very little pain, with an ordinary nail-knife, pair of scissors, or nail-nippers, by first slitting it up on each side with the nippers or scissors, and removing the portion of nail thus partially separated with the knife, so as to expose the corn, which is then to be extracted in the usual way.

This form of corn, being produced by accidental causes, when properly extracted seldom or never returns.

"In those cases, where there is a corn situated in the inner flap of the great toe, it is necessary to remove several layers of the cuticle previously moistening them, until the corn is exposed, when it should be extracted. If it extends beneath the nail, a part thereof must be cut away, until the corn is distinctly seen, and then it should be taken out.

"It would be difficult to give more explicit instructions for the performance of these operations. Dexerity in the use of the instrument, in these as in every other operation connected with surgery, can only be obtained by practice and experience. This remark applies generally to the extraction of all kinds of corns."

This work, while it is professional, is not meant to be confined to the profession; nor ought it to be. The management of the feet—of the feet of children, especially—must be left very much to families; and great suffering and inconvenience in after life would be prevented, by the dissemination of the knowledge contained in this little volume among parents. However one may be disposed to smile on reading the title-page, we venture to say that no one who goes through the work will lay it down without a feeling of respect for the good sense, learning, and candor of its author.

ART. VII.—*On the Theory and Practice of Midwifery.* By FLEETWOOD CHURCHILL, M. D., M. R. J. A., Licentiate of the College of Physicians in Ireland; Physician to the Western Lying-in Hospital; Lecturer on Midwifery, &c., in the Richmond Hospital School of Medicine; Author of "a Treatise on the Diseases of Females," &c. &c. *With Notes and Additions*, by ROBERT M. HUSTON, M. D., Professor of Materia Medica and General Therapeutics, and formerly of Obstetrics and the Diseases of Women and Children, in the Jefferson Medical College of Philadelphia; President of the Philadelphia Medical Society, &c. &c. Second American edition. With one hundred and twenty-eight illustrations from drawings by Bagg and others. Engraved by Gilbert. Philadelphia: Lea & Blanchard. 1846. (8vo. pp, 525.)

From the title-page the reader will be able to divine the character of this work, even if he should never have heard of it before; which, however, is by no means a probable case. The author of it is one of the masters in the obstetric art, whose name is known to every reader of English medical literature. His work on the "Diseases of Females," as well as the volume, the second edition of which stands at the head of this article, has been widely circulated in our country, and much esteemed by the profession everywhere. The form in which his "Midwifery" now appears, will recommend it equally to the student, seeking to learn the first principles of the science, and the practitioner, desirous of knowing the opinions of an experienced and judicious writer on any point of

practice. Without being as learned as Ramsbotham, its references are numerous enough for the purposes of most readers, and its practical directions are given with clearness, and at sufficient length. Its illustrations are admirable, and with its full index, clear type, fair paper, and substantial binding, it forms a volume worthy of a place among the standard works on Obstetric Medicine.

We have just risen from the perusal of Dr. Churchill's chapter on *Phlegmasia dolens*, a case of which under our charge has caused us to consult all the authorities relative to that affection within our reach. Of course, in looking through many treatises on the same subject, we have met with much repitition, especially in the works recently published; but in none did we find a fuller or more satisfactory account of all that pertains to the disease than is given by the volume before us.

It will be singular indeed, if, with such writers as our times have produced, and a press teeming with works in which art strives successfully to exhibit nature as she is, we should not have an accomplished race of obstetricians. The study of books, in which all is made as intelligible as the mechanism of labor is rendered by the illustrations of this volume, is not a toil, but a pleasure.

The rank which women hold in society is deemed to be a pretty sure criterion of the civilization of a people. Among savages they are slaves, but as men rise above a state of barbarism, they grow respectful towards the weaker sex, indulgent to their weaknesses, and studious of their happiness. If our profession be tried by this test, it must be pronounced eminently civilized. No branch of the healing art is cultivated with more zeal or assiduity than obstetrics; hardly any other has called forth, in latter years, so many excellent productions.

ART. VIII.—*An Elementary Treatise on Midwifery; or Principles of Tokology and Embryology.* By ALF. A. S. M. VELPEAU, M. D., &c. &c. Translated from the French, by CHARLES D. MEIGS, M. D., Member of the American Philosophical Society; Professor of Midwifery in the Jefferson Medical College, &c. Third American edition. With *Notes and Additions.* By WILLIAM HARRIS, M. D., Member of the American Philosophical Society; Lecturer on Midwifery and the Diseases of Women and Children, &c. Philadelphia: Lindsay & Blackiston. 1846. (8vo. pp. 800.)

This work has been well received by the profession in America, as is shown by the circumstance that it has passed to a third edition. The name of Velpeau is familiar to all medical readers. As a writer, he is voluminous beyond any living medical man, having, it is said, written for the press more than twenty-five thousand pages, amounting to seventy-two volumes; and his age still does not exceed fifty years. Besides these medical works, he is the reputed author of one hundred and forty other articles and memoirs. His industry is wonderful, and he seems to be acquainted with all that has been contributed to medical literature in his own and every other language. The work before us possesses peculiar merits as an elementary treatise on midwifery, and may be profitably placed in the hands of students. Whatever was originally deficient in it has been supplied by the learning and judgment of our countrymen, who have translated and edited the work. Among these additions one of the most elaborate and valuable is a chapter, by Dr. Harris, on *puerperal fever.*

ART. IX.—*A Manual of Chemistry.* By RICHARD D. HOBLYN, A. M. Oxon. Author of a Dictionary of Terms used in Medicine and the Collateral Sciences. New York: Samuel S. & William Wood. 1846. (18mo. pp. 335.)

In this little volume, Chemistry is exhibited in the utmost state of condensation, its leading facts and principles being

brought within the compass of a pocket-volume. Concise as is Fownes's "Chemistry for Students," the work of Hoblyn is shorter. And yet it is lucid, and satisfactory, as far as it goes, forming a manual which the young student will consult with great advantage. Having mastered some such elementary treatise as this, the student is prepared to take up the more elaborate systems of chemistry; but our observation is that most minds are overpowered by the large works when put to their study without any preparatory training, and that, in this way, a distaste not unfrequently is excited to the science. If the learner be very young, let him enter upon the study with Hoblyn for his guide; if more advanced in years and learning, let him begin with the elements of Fownes, and subsequently study Kane, Graham or Turner; and thus, conducted by easy and natural steps, he will be captivated by the developments of a science so rich in wonders, and so manifestly practical and useful, instead, as is now too often the case, of throwing aside his books in despair of ever comprehending its truths. The manual before us is well adapted to the wants of those who are to prosecute the study without the aid of an instructor. It is illustrated by wood-cuts, and gives directions for manipulation sufficiently full for a work of the sort. In a word, it is well suited to the class of beginners, and doubtless will be extensively introduced into schools.

ART. X.—*Elements of Surgery.* By ROBERT LISTON, Surgeon to the North London Hospital, Professor of Clinical Surgery, &c. &c. &c. Fourth American from the last London edition; *with copious Notes* and Additions; by SAMUEL D. GROSS, M. D., Professor of Surgery in the Medical Institute of Louisville, Surgeon to the Louisville Marine Hospital, &c. &c. Illustrated with numerous engravings. Philadelphia: Ed. Barrington & Geo. D. Haswell; Louisville, Ky.: James Maxwell. 1846. (8vo. pp. 664.)

Few works on Surgery have been more popular than the Elements of Mr. Liston. A large edition was issued three years ago, and the publishers now offer to the medical public a fourth, enriched by the indefatigable editor with the modern

discoveries in surgical science. The author well remarks in his preface, that "the rapid advancement made in the pathology and treatment of surgical diseases demands a perpetual revision and correction of the systematic works devoted to this department of the healing art." In this a mutual obligation is implied between authors and practitioners. As it is the duty of the first to reflect the existing state of the science, keeping pace with discovery, so it is the duty of the latter to inform themselves of all that is added, from time to time, to the curative resources of the profession. The authors have faithfully performed their duty in the execution of this work; and its rapid sale shows that practitioners are not unmindful of theirs.

ART. XI.—*Lectures on the Operations of Surgery, and on Diseases and Accidents requiring Operations.* By ROBERT LISTON, Esq., F. R. S., Senior Surgeon to the University College Hospital, and Prof. of Clinical Surgery in the College. *With numerous Additions.* By THOMAS D. MUTTER, M. D., Professor of Surgery in Jefferson Medical College, Philadelphia; Fellow of the Royal Medical and Chirurgical Society of London; Foreign Honorary and Corresponding Member of the Provincial Medical Association of Great Britain; Corresponding Member of the National Institute at Washington; Fellow of the College of Physicians, Philadelphia; Member of the Academy of Natural Sciences, Philadelphia; Corresponding Member of the New York Medical Society; Honorary Member of the Medical Societies of Philadelphia, Virginia, &c. &c. &c. Philadelphia: Lea & Blanchard. 1846. (8vo. pp. 565.)

These Lectures were delivered in 1844, at the University College, London, and published in the London Lancet. Dr. Mütter has rendered a service to his professional brethren in this country by their reproduction in the present form.

This volume embraces all the lectures of Mr. Liston published up to this time, but does not conclude the course. It will be followed by a second, should the publication of the lectures be continued. The additions of Dr. Mütter make nearly one-half of the volume. We have barely room to announce its publication here; but shall seize an early opportunity to notice it at greater length.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Contagiousness of Puerperal Fever.—Dr. Kneeland, in the January number of the American Journal of the Medical Sciences, comes to the following conclusions on this point:

1. From the confinement of cases to the practice of single physicians and nurses in populous cities; from the fatal results attending post-mortem examinations; from its ravages in hospitals; that puerperal fever is contagious; that it may have other modes of propagation, in certain states of the atmosphere, and among strongly predisposed individuals; but that the fact of its conveyance by practitioners attests its contagiousness.

2. That it may be propagated by direct inoculation with the fluids of the living and the dead; by the effluvia arisng from the bodies of the sick, inhaled in the very chamber of death, (as in the wards of a hospital,) or carried about by the person of the physician; by clothes, bedding, (fomites,) which have been in contact with a diseased individual.

3. That the order of propagation from the physician to the patient, and the regular succession of cases, show that the epidemics of puerperal fever are, in almost all cases, the *effects* and not the *causes* of the contagion.

4. The contagion acts according to the frequency of communication between the physician or nurse, (in whose practice are cases,) and lying-in women, independently of insalubrity of places, wretchedness of patients, or the neighborhood of dwellings—for, although poverty and misery seem to predispose to it, communication is none the less fatal to the higher classes.

A case, to all appearance sporadic, may communicate the disease; a mild case may, communicate a severe disease, and *vice versa.*

6. Immunity proves nothing against contagion; it may be the effect of an acquired or temporary inaptitude—it is equally inexplicable in all contagious diseases.

7. The rapidity of its propagation shows that it is contagious at the commencement; the fatal results of attending autopsies, indicate this character after death.

8. That a physician should not make, or be present at an autopsy of this disease; or, if he does, should take proper measures to cleanse himself and dress, for the safety of his next patient—that if a case (or several cases) occur in his practice, he should consider himself, in the language of Dr. Holmes, "a private pestilence," and regulate his conduct accordingly—that persons who have washed, or have otherwise handled the clothes or bedding soiled by the discharges of this disease, should not approach, much less nurse, a woman after delivery.

9. That when the disease is prevalent, a prompt removal from possible intercourse with a "pestilential" physician, and a strict attention to ventilation, cleanliness, quiet, proper food, &c., are the dictates of a reasonable fear.—*Amer. Jour. of the Medical Sciences.*

Sub-Carbonate of Iron in the treatment of Uterine Hemorrhage. By S. Malherbe, M. D., of Bonvillard, Switzerland. (Translated for this Journal, from the Journal des Connaiscances Medico-Chirurg., October, 1845.)—Why have authors classed the preparations of Iron amongst emmenagogues? Doubtless because they have regarded them as exerting a powerful stimulation on the uterine system, the effect of which would be to provoke menstruation. The result of observations on this point would lead us to expect from their use considerable hemorrhage. Hence, it was not until we had read the learned treatise of Therapeutics and Materia Medica by Professors Trousseau and Pidoux, (article Iron, class Tonics,) in which these authors cite the case of a chlorotic female affected with abundant uterine hemorrhage, and which was successfully treated with lozenges of ferruginons chocolate, that we ventured to use the therapeutic agent in question. We confess that we apprehended effects opposite to those we de-

sired; but our fears were dispelled, and the result has surpassed our hopes, as may be seen by the subjoined cases.

Case I. P——, a mechanic, consulted me in January, 1842, in relation to his wife, who was 42 years of age; strong, robust, of a rather lymphatic temperament, who had menstruated regularly and enjoyed good health, with the exception of a slight uterine hemorrhage which occurred in November, 1841. He stated to me that his wife was suffering great loss of blood and was very feeble—that the hemorrhage was preceded by pain in the lower abdomen and loins, &c. She was, however, still able to attend to her household affairs. We prescribed as follows:

℞. Pulv. sub-carbonate of Iron, 155 grs.
Pulv. cinnamon, - - - - 10 "

Mix, and divide into twenty doses—one to be taken thrice daily in a little sweetened water.

In two days the hemorrhage ceased. She was directed to take the remainder of the doses in order to ensure success, and has had no further return of the disease. Regimen was tonic and analeptic.

Case II. B——, aged 48 years, had menstruated regularly, the mother of three children, of a good constitution, and in the enjoyment of fine health, was taken without known cause, with great uterine hemorrhage. I saw her on the 13th May, 1843, and found her in bed, pale and feeble, with considerable flow of blood. She had been suffering several days with pain in the loins and hypogastric region—was agitated, could not sleep quietly; pulse irregular and frequent; occasional chills. I ordered her:

℞. Pulv. sub-carb. Iron, 180 grs.
Pulv. cinnamon, - 7 "

Mix, and divide into fifteen doses—one to be taken thrice daily in a little tea. Perfect repose. Cooling drinks.

On the fourth day the hemorrhage had entirely ceased. The patient took the remaining doses and continued well. In July following, she consulted me for the same affection. I ordered the same prescription, and with the same success.

Case III. On the 23d September, 1843, I was called to see Miss P——, aged 25 years, of a sanguineous temperament and habitual good health, although irregularly menstruated. On the 26th she suffered hemorrhage, and on the 28th was compelled to take her bed. I found her feeble, pale, with difficult respiration, palpitations, small and frequent pulse, thirst, and pains in the loins and abdomen. The flow was consid-

erable, and increased by motion; no sleep; agitation; apprehension. I prescribed:

℞. Pulv. sub-carb. Iron, 210 grs.
Pulv. cinnamon, - 7 "

Mix, and divide into twenty doses—one to be taken every three hours, in sweetened water. Perfect rest. Crowfoot tea and broth.

30th Sept. Same state—treatment continued. Oct. 1st. Dry cups to the chest; flow suspended an hour after, but returned during the night. 2nd. Flow diminished—nothing but a few coagula discharged; able to sleep. 3rd. Flow arrested; general condition good; the patient can move about—same treatment continued. Convalescence was slow because the hemorrhage had been great; several weeks were required to restore her to perfect health, during which she used animal broths, vegetables, and a little red wine; she also took a tea made with *garmander* (chamedryos amarum) and orange peel. I see her frequently, and her health is perfectly good.

Case IV. On the 23d October, 1844, a female, 62 years of age, robust, who had borne several children, and ceased menstruating, consulted me for uterine hemorrhage of several weeks continuance, brought on by mental distress. She travelled a league to see me; was feeble, pale, had pains in the loins and abdomen, a small and feeble pulse, free respiration, chills, headache, &c. I recommended nourishing diet, rest, and the powders of sub-carbonate of Iron and cinnamon.

I was a long time without seeing her, but met her accidentally in the village, when she told me she had been very much relieved. As she had not taken enough of the powders, I prescribed others; for they should in such cases be continued until the disease be arrested. I have not since seen her.

Case V. B——, aged 26 years, the mother of three children, of a lymphatico-sanguine temperament, generally healthy, was delivered of her last child about a fortnight ago. I was called to see her on the 10th November, 1844, and learned that she had been taken with uterine hemorrhage three days before, without evident cause. Found her pale, with headache at night, sleepless, very feeble, suffering occasional pains in the loins and hypogastrium, thirst, anorexia, with healthy stools, cough, palpitations, small and frequent pulse, hot skin, and occasional chills—the flow was coagulated. I prescribed the same powders, rest, broth, crowfoot tea sweetened, &c. The hemorrhage was arrested on the 12th, and returned no more.

Case VI. R——, 46 years of age, unmarried; sanguineous

temperament, strong, robust, was healthy until her menstruation became irregular and followed by copious hemorrhage, which left but a short interval before the return of the menses. I was first consulted by her on the 9th November, 1844: she was feeble, had good appetite, a little distress in the loins and epigastrium; pulse small and frequent, skin natural. This state had existed three weeks. I prescribed, after her menstruation, a combination of 180 grs. of sub-carb. Iron and 8 grs. of pulv. cinnamon, to be divided into sixteen doses—one of which to be taken every three hours.

Dec. 2d. General condition better—flow diminished. Prescribed 25 more doses of 15 grs. each, to be taken every two hours. 10th. Hemorrhage arrested; strength returning; powders to be continued every third hour. The cure was complete. I will add that, in this case a physician insisted that there was an organic affection of the uterus, &c.

Case VII. V——, aged 35 years, nervoso-sanguineous temperament, medium stature, had had several children, an attack of nervous fever in 1838, but generally healthy until the end of October, 1844, when she experienced pains in the abdomen and lower extremities, occasional chills, palpitations, and headaches. She was suddenly taken with severe uterine hemorrhage, which returned every two or three days. Her state on the 11th November, 1844, is as follows: Pale, restless during the night, pulse small, frequent and irregular, pains in abdomen, lungs and encephalon normal. Prescribed sub-carb. ferri and cinnamon, and quiet. A few days after, she expelled a large coagulum, containing a macerated and bloodless fœtus about three months old, which appeared to have been dead for some time. I ordered the powders to be continued in order to arrest the hemorrhage.

In this case the remedy moderated the hemorrhage, but could not arrest it so long as its cause remained. It will be remarked that the abortion was not occasioned by the Iron, for the hemorrhage existed prior to its administration.

Case VIII. On the 25th October, 1844, I was called to see Mrs. D——, aged 25 years, robust, sanguineous temperament, usually healthy, and four months pregnant. She was taken, without known cause, eight days since, with great uterine hemorrhage, preceded by the expulsion of the fœtus; when I saw her, the flow was continuing, face pale and haggard, feeble, warm skin, thirst, little appetite, palpitations, pulse small, frequent and irregular, restless sleep. I prescribed the powders. 29th. Flow diminished. 30th. Flow ceased in the

morning. Powders continued every three hours to confirm the cure.

Case IX. Called on the 14th February, 1845, to see Mrs. V——, aged 27 years, lymphatic temperament, had, in 1843, ptyriasis capitis; otherwise healthy—gave birth to her first child ten days ago, and was taken, without known cause, five days afterwards with considerable uterine hemorrhage. The midwife had used some remedies without success. I found the patient feeble, pale, with lumbar pains, small and rather frequent pulse, general depression, unquiet sleep, and syncope whenever moved in bed. I ordered the powders of iron (210 grs.) and cinnnamon (8 grs.) divided into twenty doses.

The hemorrhage ceased at 11 P. M. She had commenced taking the powders at noon; one every half hour, and then every hour. Broths, herb tea, analeptics, &c., completed the cure.

Case X. C——, aged 31 years, lymphatico-sanguine temperament, good health until the end of October, 1844, but menstruated too freely. Was left quite feeble after each period. She consulted me in April, 1845. Nothwithstanding her weakness, she still had some appetite. Digestion laborious; alvine discharges natural; pulse small and frequent; sleep good; pain in loins and hypogastrium; other functions normal. I prescribed the powders in doses similar to the preceding case; one dose to be taken the two days preceding menstruation and during the three first days of its existence. The desired effect was secured; the flow was less copious, general health better, digestion improved. The remaining doses were taken before the next return of menstruation in order to regulate it. The result was satisfactory, as I had anticipated.

Case XI. On the 23d May, 1845, I was summoned to see Miss L. B.——, aged 24 years, of a sanguine temperament, robust, and of good health. She was taken in the night, without known cause, with very great uterine hemorrhage. I found her feeble, pale, agitated, rigors followed by heat, small, contracted, but resisting pulse, thirst, pain in the loins and hypogastrium, &c. The hemorrhage still continuing, I gave her the powders. On the morning of the 26th the flow was arrested, and health gradually restored.

Case XII. Mrs. M——, 27 years of age, had two children, enjoyed good health, save that the menstrual flux is excessive, and continues five days, being followed by debility and prostration. Indeed her state was rather one of hemorrhage than of menstruation. I ordered her 60 grs. carb. fer. with 8 grs. pulv. cinnamon, to be divided into four doses—one to be taken

at night in a little sweetened water. The first dose diminished the flux; the second lessened it one half. My object being simply to diminish the discharge, my design was attained.

Case XIII. A female, asthmatic, was taken a fortnight after parturition, with violent uterine hemorrhage. I found it very difficult to control, by refrigerants, cold lotions to the abdomen and hands; it would always return in a few days. I was obliged to resort to the sub-carb. of iron in large doses. Since then the hemorrhage has not returned, although convalescence was very slow.

In 1839, I saw a lad 13 years of age, feeble, and who suffered with epistaxis every day for about an hour, which left him weak and dejected, and finally caused his death. Had I then known the use of the sub-carbonate, he might have been saved.

In 1844, I attended Mrs. D——, 32 years of age, of a sanguine temperament, who had been bleeding at the nose several days. A physician thought her case fatal, such was her state of anæmia. Her blood was pale, for she had lost four or five pints of it. I ordered her 180 grs. sub-car. fer. and 15 grs. pulv. cinnam., to be divided into twenty doses—one of which to be taken every two hours. The first doses arrested the epistaxis. All known remedies had been previously used in vain.

The details of my cases may appear too scanty; but I have furnished only the prominent facts, in order not to lengthen this communication. These cases demonstrate that the sub-carbonate of Iron is a good hæmostatic remedy in uterine hemorrhages, even in those which proceed from the presence of the ovum or its appendages. (See case VII.) In all the other cases, the flow ceased in two or three days, and in one of them in ten hours.

The 10th and 12th cases will show that the remedy may be useful in excessive menstruation; that it may moderate and even regulate it. They all teach us that it can be used without hazard. I know that we should not be too exclusive; but, for my part, I prefer this preparation because it is not disagreeable when taken with a little cinnamon. It is necessary to have a good article. M. Bertholet, apothecary at Grandson, has prepared it for me very skilfully, and it always acts satisfactorily. It will be remarked, that the doses do not vary much, and that they were given at greater or less intervals, according to effect. We need no longer be afraid to give it in acute uterine hemorrhage, since it is not an emmenagogue as stated in works on Materia Medica. Nothing but

observation could have convinced me of its opposite effects. I am therefore authorized to state that the sub-carbonate of Iron is not an em.nenagogue, but, on the contrary, arrests and moderates the menstrual flux—will arrest internal hemorrhages, and, in short, is a powerful hæmostatic agent. Let this active agent be no longer dreaded. I furnish these cases in the hope that they may prove useful to that extensive class of practitioners whose first object is the relief of their patients. —*Southern Med. and Surg. Jour.*

Phosphate of Ammonia in Gout and Rheumatism. By Dr. Buckler, of Baltimore.—In reviewing the cases which I have published, it will be noticed that thickening in the white tissues, of long standing, has disappeared under the continued use of phosphate of ammonia. Now it is in such cases that the lithic acid diathesis generally prevails, and this agent seems to act here, by depriving the blood for a long time of uric acid and soda, thus creating a demand for these elements in that fluid, and thereby bringing about a re-absorption, as it were, and solution of the superfluous lithate of soda which is deposited in the white tissues. As a result of rheumatism, we sometimes see arthrosis of long standing, where the joints are deformed or dislocated from transformation of tissue, and in gouty subjects we find calcareous deposits, often crippling the joints and interfering with the free play of the tendons. In such cases, we cannot hope for relief in this, or any other agent; but we may relieve the acute attacks which supervene in these chronic cases, and thus save suffering to the patient, and prevent the further increment of calcareous deposit. I have reported only those cases of acute rheumatism in which the phosphate of ammonia was, for the time being, used as a single agent, believing that these would prove more satisfactory to the reader; but I would not be understood as advocating the exclusive use of this remedy; to do this would be the work of an empiric. The leading remedies should be adopted here, as they are in pneumonia, in which disease the lancet is not dispensed with because antimony is used, notwithstanding the efficacy of this last remedy is universally acknowledged.

In acute rheumatism, the disease is seated in the blood, but then there are painful symptoms related with the alteration of this fluid, such as local pain, heat, and swelling in some part of the body, and increased force in the circulation; anodynes

will mitigate the one, and the lancet moderate the other, until the primary indication is fulfilled in restoring the blood to its healthy condition. In the case of a boy aged thirteen, who suffered with acute rheumatism in the shoulder and back of the head, and in whose case there seemed to be some implication of the pneumogastric and glossopharyngeal nerves, there being difficulty in deglutition, great aversion to drinks, and irritable stomach, cups were applied to the back of the head, and the following remedies given with the most perfect relief. Tinct. digitalis ʒj; cyanide potass. gr. iij; hyoscyamus ♁ij; phosph. ammonia ʒij; water ℥iv. Two teaspoonfuls every three hours.—*Amer. Jour. of the Med. Sciences.*

Lithotripsy.—Calculus measuring one inch and an eighth in diameter, and composed of phosphate of lime—destroyed in eighteen sittings by Heurteloup's instrument, and causing neither pain nor the loss of one drop of blood. By Paul F. Eve, M. D., Professor of Surgery in the Medical College of Georgia.—In my previous communications on the subject of stone in the bladder, published in the American Journal of the Medical Sciences, and in this Journal, the operation recommended was the bilateral. All the patients upon whom I have thus operated were under eight years of age. It gives me great pleasure to state that the first adult laboring under calculous affection, who has applied for relief, has been cured by the bloodless and painless operation of lithotripsy.

Mr. James M. Layton, aged 34, of Early county, in this State, was kindly directed to me by Dr. Wm. J. Johnson, of Fort Gaines. He had been laboring under symptoms of stone for three years, and ten months ago was sounded by Dr. J., and its existence clearly ascertained. Mr. L. arrived here on the 14th of last November, and the next day, after introducing a large sound and finding an ample urethra and good condition of the bladder, lithotripsy was proposed instead of lithotomy, for which he had come to consult me. On the 15th, the calculus was seized with Heurteloup's crusher, and found to measure thirteen and a half lines, or one inch and an eighth in diameter: this was verified by Prof. Means. Having made the necessary preparations, the operation was performed on the 17th, before the Class of the Medical College. The patient was seated on the edge of a table, the instrument introduced, and the stone secured. By gradual forcible pressure with the hand, it suddenly yielded with a crushing report audi-

ble to many in the room. It gave the sensation of a pretty resisting shell containing more friable materials. To the gratification of all present, the patient immediately voided some of the debris, one or two fragments being the size of buck-shot. The bladder contained about eight ounces of urine. The operation itself did not occupy five minutes. After it, Mr. Layton amused himself with the students in the College museum; he then walked home to the Surgical Infirmary, took a warm hip-bath, and passed a comfortable night.

On the 18th, at 6, A. M., found his pulse 66 in the recumbent position. He had experienced no pain, and had passed other portions of the stone. Prescribed diluent drinks, moderate diet, and the warm hip-bath twice a day. 6, P. M.—Had eaten some chicken from misunderstanding the directions; pulse at 84.

19th. Not so well this morning; feels some soreness along the urethra; has some fullness about the head, and pulse still 84. To take a dose of calcined magnesia at once, and to use the bath. 3, P. M.—Medicine has operated well and to the entire relief of the patient. Came before the Class again; injected 7 ℥ of mucilage into the bladder; introduced the instrument and crushed two fragments.

From this time to December the 5th, the instrument was employed for a few minutes nearly every day. On the 27th of November, the fragments which had been preserved, (for many had been lost as the bowels had been evacuated at different places, and the smaller particles never were collected,) weighed 47 grains. On the 28th, those passed after one sitting weighed 15 grains. December 2d.—What had been collected for the three past days amounted to 65 grains; and for the two last sittings we weighed 55 grains. Total weight of large fragments, exclusive of some known to have been lost, and of the finer particles, 182 grains, or over ʒiii.

On the 4th, I could detect no stone. On the 5th, I made a careful and minute exploration of the bladder, by all the ordinary processes, without finding a particle remaining—the patient insisting he was entirely free of all symptoms. The next day he was examined by three physicians before the class, and pronounced free of calculous affection. He left the same day for his residence, distant about three hundred miles.—*Southern Medical and Surgical Journal.*

On the Effects of Food on the Blood.—Dr. Buchanan has drawn the following conclusions on the state of the blood after taking food:

1. The serum of the blood of a healthy man fasting, is perfectly transparent, and of a yellowish or slightly greenish tint.

2. A heterogeneous meal, such as that usually set on the tables of the rich, renders the serum white.

3. The whiteness may commence as early as half an hour after eating, and may continue ten or twelve, and sometimes, as long as eighteen hours, according to the kind and quality of the food, and the state of the functions of the primary and secondary digestion.

4. *Starch*, or *sugar*, probably all vegetable substances destitute of oil, give no whiteness to the serum of the blood.

5. *Fibrin*, *albumen*, and *casein*, and probably *protein compounds* in all their forms, if destitute of oil, give no whiteness.

6. Oils combined, whether naturally or artificially, with protein compounds or with starch, render the serum of the blood white; probably, therefore, oils produce that effect in whatever way taken.

7. Gelatin seems to render the serum of the blood white; this, however, cannot be considered as certainly established, as there may have been some fat in the beef tea which was taken along with the calf-foot jelly in both experiments on which the above conclusion rests.

8. That coagulum of the blood very frequently exhibits, after taking food, a crust of pellucid fibrin, or of pellucid fibrin dotted with more opaque particles, and with little of the contraction technically named "cupping."

9. The appearances of the coagulum just mentioned are much more common after azotized than after non-azotized food.

These conclusions relating to the visible characters of the blood may be considered, with the single exception above mentioned, as well established. The conclusions which follow relate chiefly to the chemical properties of the blood, and are not worthy of the same reliance; but the evidence on which they rest has been laid before the reader, and he must judge of them for himself.

1. The substance defined above under the name of Pabulin, is most abundant in the blood a few hours after taking food, sooner or later according to the rapidity of digestion.

2. It is less abundant as the time when the food has been taken is more remote, and is small in quantity after a fast of twenty-four hours.

3. It is much more abundant after azotized, than after non-azotized food.

4. It varies in quality, floating or subsiding, according to the kind of food taken.

5. It is probably analogous in nature to the white substance which gives color to the serum of the blood.

6. The difference between these two forms of this substance probably is, that it is sometimes combined with an alkaline, or earthy salt (chloride of sodium, sulphate of soda, &c.,) and sometimes with an oily body (stearate of glycerine, &c.) In the former case it seems to dissolve completely in the blood, while in the latter it is only partially dissolved, and renders the serum opaque.

7. The azotized principles of the food are probably made to combine, in the digestive tube, with the alkaline, earthy, and oily salts mentioned above; and thus become capable of being absorbed into the blood.

8. The alkaline and earthy compounds are probably absorbed directly by the blood-vessels, while it seems to be well ascertained that the oily compounds are absorbed through the lacteals.—*London Medical Gazette.*

Longings of Pregnant Women.—The appetites and longings of women in pregnancy are indubitable proofs of disordered blood; for, if we knew rightly how to trace effects to their causes, we should find, that the substances for which they long, contain the elements in which their blood is defective. Thus if a woman have a longing for cabbage, greens, radishes, or any species of the Brassica, we may know that sulphur and phosphorus, and most probably hydrogen and nitrogen, are deficient. If she have longing for fish,, we may conclude that gelatine and phosphorus are deficient. If she long for carbon in any shape, it is needed to neutralize the nitrogen and hydrogen in excess—and if she long for lime and magnesia, they are defective. In these matters, physiological observers have done little more than recount the fancies of gestating women, and leave them to the pity or ridicule of medical men. "As fanciful as a pregnant woman," is an old standing proverb.—*Dr. Shearman in N. Y. Jour. of Med. and Surg.*

Headache.—Dr. McCready relates cases of violent headache relieved by the use of the saturated *Tincture of Aconite* in doses of four or five drops taken internally.—*N. York Jour.*

Observations on Acid Rain. By M. Ducres, (Journ. de Pharm., April, 1845)—During the early part of June, 1842, a storm occurred in the town of Nismes, accompanied with much thunder and a large amount of hail. From some peculiarity in the taste of the hail, the author was led to examine it more closely. Having collected a quantity of it, and allowed it to melt, it was found to have an acid reaction, which, upon examination, was found to be due to nitric acid, formed no doubt by the action of electric fluid on the elements of the atmosphere. The occurrence of nitric acid in hail is not new, but the statement of this fact goes to confirm observations previously made.—*American Journal of Science and Arts.*

Gonorrhœa.—When is a patient secure against communicating the disease? Few practitionersof experience but have had questions addressed to them with earnestness on this subject. There are cases in whi h it is of great importance to be able to give a definite answer to such questions. We will quote Ricord's opinion on this topic, and the quotation will also embrace his views of the conduct which the medical adviser is bound to pursue in certain cases of peculiar delicacy and responsibility. Mr. Acton says, "Ricord considers that when the secretion is reduced to a thready mucus, which is transparent, like vermicelli, contagion is not to be dreaded. On the contrary, so long as the secretion is purulent, it is capable of causing a similar complaint in any mucus membrane with which it comes in contact." * * * * "Patients sometimes present themselves to me to know if they may marry. I persuade them against it if they have a simple gonorrhœa; but if it be a virulent complaint,—i. e. Syphilitic—I wash my hands completely of the affair. If they still persist, I tell them that they may give a gonorrhœa to their wives, which, unless cured previously to confinement, may cause a loss of eyesight to the child:—called, however, afterward to cure the lady, I attempt to explain the affection which she has contracted, by speaking of the fatigue of the honey moon, as well as the *dejeuner a la fourchette*, and, in the interim, cure both parties. Such is the part that a medical man often has to play, and many disputes in married life, may be thus avoided, and the Surgeon must lend himself to deception."—*Ricord on Venereal Diseases.*

The Brocchieri Styptic.—Prof. Mott, of New York, in a late clinical lecture, thus alluded to this article, and its discoverer, M. Brocchieri:

"I knew M. Brocchieri when I was in Paris; he is an uneducated man, and a perfect charlatan. When his discovery was made known in Paris, it created some stir; and I made several experiments with it, in connection with several other gentlemen, one of whom was engaged in the preparation of the watar. The subjects of the experiments were strong and healthy sheep, upon whose carotids we operated, and we found that its power to stop hemorrhage was next to nothing, and where the bleeding was arrested it was principally from the pressure made by the large quantities of lint, with which the wound was filled. Therefore, I say, as the result of my experience, that the styptie powers of this preparation are not to be relied upon, for a moment: that it is infinitely less useful than an infusion of rhatany, or tannan, and that it can never take the place of needles and ligature.

The other qualities that have been ascribed to it, of curing diseases, and arresting hæmoptysis, are equally non-existant.—*N. Y. Med. and Surg. Reporter.*

Honor to Bichat—His head mistaken for the head of an Idiot.—According to a late number of the New York Courier des Etats Unis, says Dr. Tabor, the remains of this celebrated physiologist and medical writer, after having reposed for forty-three years in the old St. Catharine cemetery, have been transposed, with great pomp, to *Pere la Chaise.* On exhuming the remains, the skeleton was found without the head. The grave diggers thought they had mistaken the bones of some decapitated malefactor for those of the celebrated Professor! but this circumstance, on the contrary, did but establish the authenticity of the skeleton. The following was revealed. When Bichat died, his loss caused Professor Roux, his intimate friend and companion in labor, very severe grief. Wishing to have constantly by him, some souvenir of his friend, M. Roux cut off his head. We will say, *en passant,* that this head was some years after presented to the Phrenological Society, which pronounced it that of an idiot! The famous Spurzheim pronounced the same opinion upon Laplace's head. However, a deputation having besought M. Roux to profit the occasion in relinquishing the head of Bichat, he at first refused, but finally consented, and the body was

re-interred entire. Furthermore, M. Roux is not the only one who has conceived the idea of thus preserving a material relic of a dear friend. When the famous Broussais died, his son cut off the head, and he keeps it in his study.—*Boston Medical and Surgical Journal.*

Death of Medical Men in Boston.—With a pretty strong medical corps in proportion to the population, we recollect of but one death of a physician in the city during a period of nearly a year. That individual's decease was chronicled last week. Notwithstanding the harmony of the profession and their admirable social organization, it was remarked that only four of his medical brethren were at the funeral. It should have been otherwise. All other associations pay a more strongly-marked expression of respect to the memory of their departed members.—*Ibid.*

On the Treatment of Bilious Colic by copious Enemata. By J. S. Paige, M. D., of Oswego, N. Y.—The case which led to my first essay in this mode of treatment occurred in the summer of 1818, when I was called to attend a man, aged about 35 years, who was laboring under a very severe attack of bilious colic. I pursued the rotine of treatment usually followed in such cases, and called to my aid several reputable practitioners of medicine as counsel, and after using various cathartic and emetic medicines, blood letting, opium, a blister on the abdomen, fomentations, general warm bathing, and oft-repeated enemas for forty eight hours or more, I found that I had made no progress towards affording my patient even any hope of relief from his almost intolerable condition, when a lucky thought, as it proved to be, came into my mind —that of making a direct application of some degree of pressure upon the constricted portion of the intestine from below, by introducing a large quantity of fluid with a syringe.

I accordingly directed six pints of water, milk, and molasses, which I commenced using with a half-pint syringe—the largest at my command at the time—and after using almost the whole of the liquid on hand, the patient began to complain of increased pain and pressure at the point of obstruction, and desired me to desist; but when I made known to him my plan of operations, and that this afforded him the only hope of relief, as I believed, he patiently submitted to

my wishes to retain the fluid and allow me to make a little firm pressure therewith on the constriction for a few minutes, which I did, and on withdrawing the syringe, I, as well as the patient, had the great satisfaction to find that the object of our most earnest desires was accomplished; for copious discharges of fæcal matter took place in a very short time, and an almost immediate relief was the result, only a considerable degree of tenderness and some fever remaining, which, however, soon subsided by the use of mild laxatives, diaphoretics, &c.

Two or three weeks afterwards the same individual had another attack of the same disease, from his own imprudence. I commenced the treatment by overcoming the obstruction in the same way as at first, which succeeded in a very few minutes in giving relief; three quarts of fluid also were used on this occasion.

The success of this plan in these two cases, induced me to commence the treatment of similar cases in the same way, and it has been the uniform mode of my treatment ever since (except in one case of a female where delicacy required a short trial of the ordinary means, and which were soon successful in that case,) and I have never failed in affording speedy relief in any case.

In two cases occurring in another individual, I found it necessary to use six quarts each time before relief was obtained; but I have never found it necessary to introduce more than about three quarts in any case, except in the ones last mentioned.

Since the compound syringe has been introduced into use, we are enabled to force liquids into the intestines with more facility than with the common syringe, and therefore whenever it becomes necessary to use large quantities in this way for any purpose, we have more efficient means of doing it at our command.

The quantity of fluid to be used in these cases must be measured by the demand of each individual case, and the directions I would give for securing the object in view, are, to introduce, on our first arrival at a case of this kind, a quantity of mild liquid, such as warm water, or warm water mixed with molasses, or some mucilaginous fluid, slowly and steadily till the obstruction be reached, and then to keep the instrument, in situ, a few minutes, and make a gentle but firm pressure with the liquid upon the constriction, for if this precaution be not observed, we may fail of affording the relief we so much desire.

After the bowels are evacuated, and the obstruction over-

come, some mild laxative should be given to gently move the bowels, and this will generally finish the work; and for this purpose a dose of olive or castor oil, I suppose, will be as good as anything, unless the disease depended on a derangement of the liver, as is often the case, and then more active medicines should be used, at the discretion of the physician.

Some of the considerations which urge me to recommend this mode of treatment are, that relief may be more promptly and surely obtained than by any other method, for although other means may act in time, there must necessarily be some delay, if they be not rejected by vomiting, which usually attends the disease.

Great certainty and promptness, these are strong recommendations in favor of the mechanical treatment, and from what I have seen. I feel very confident that it will succeed in almost all *curable cases*, if seasonably applied, and there is perfect safety also to recommend it, if used with reasonable caution. The use of large injections may serve other valuable purposes—they may be resorted to in removing intestinal concretions, hardened fæces in obstinate constipation, in reducing intussusception of the bowels, perhaps in removing worms in some cases, also in irritated conditions of the mucous membrane, in dysentery or other inflammations, and in some cases of poisons in the bowels.

From the great extent of the digestive and absorbent tube and its many diseases, I think it not improbable that much may be done by large injections as media of conveying medicinal agents where they may be directly applied in the treatment of diseases in that canal.—*N. Y. Jour of Med.*

Gunshot Wound of the Brain, attended with extensive Cranial Fracture, and followed by complete Recovery.—The following very remarkable case is related by Mr. Ford, of the Madras Medical Establishment, in the L. & E. Monthly Journal of Medical Science, Sept., 1845.—On the morning of the 31st January, 1845, a lad about 15 years of age was brought into hospital with a gunshot wound of the head. He was quite insensible, and breathing stertorously upon admission. Examination, after shaving the head, disclosed the following amount of injury:

The ball had entered the head on a level with, and three-fourths of an inch anterior to, the summit of the right ear, and had made its escape through the left os frontis, an inch

and a quarter above the centre of the eyebrow, fracturing the skull irregularly between both wounds, in such a manner as to implicate and depress the right orbit. The right os frontis, over its sinus, had likewise met with a comminuted fracture, which gave to the touch the crepitating sensation of a broken egg-shell. In addition to this varied fracture, one proceeded upwards and backwards, from the spot where the ball entered to the lambdoidal suture. The vortex was raised and inclined over to the left side, to such an extent as to enable the finger to be laid in the sulcus formed by the gaping margins of the fracture, especially between one wound and the other, and considerable pressure failed to approximate appreciably the edges. The right eye was completely closed by tumefaction, and the sinking of the orbit; strabismus had occurred in the other, and its pupil was but a speck. From the wound in the forehead, blood was trickling, and much had evidently escaped from it, as large clots were still adherent to his face. No spiculæ of bone were detected in either wound. The hemorrhage was soon checked by a cold application which was continued to the head; the orbit was raised to its proper position; and saline and camphor mixture administered.

The following is a brief abstract of the most prominent symptoms, and treatment of this extraordinary case:

On the 3d February, he became in a slight degree sensible, and answered, Yes, (in Hindostanee,) to each and every question. The brain had gradually protruded since admission, through the outlet at the forehead, and on this date a mass larger than a walnut, and about half an ounce in weight, consisting of cortical and medullary substance, was excised. Pulse 130, and of moderate strength. The saline mixture and lotion were continued, and a purgative draught exhibited.

On the evening of the 5th, delirium, incoherent speech, and other symptoms of cerebral inflammation supervened. The head was freely leeched, and the sero-sanguinolent contents of a large swelling at the posterior extremity of the fracture, contiguous to the occiput, were evacuated by free incision. The whole scalp was puffy. Pulse 160, and distinctly computable. The purgative draught was repeated, and the mixture and lotion continued.

6th. The leeches were again applied.

7th. Some thin semi-transparent pus was seen oozing through the three wounds, including the scarification at the back of the head. Pulse 140, and soft. Medicines continued.

8th. Discharge more copious and purulent, and pieces of

brain, unaccompanied by any fragments of bone, were passed from the wounds caused by the bullet. Delirium had increased. Was directed to take half a grain of the bi-sulphate of quinine, three times a-day; and mutton broth frequently. The wounds were kept open by dry lint.

9th. Stools and urine were passed involuntarily. The delirium continued unabated. The discharge from the wounds was free and healthy.

10th. A puncture was made in the right upper palpebra, near the inner canthus, and exit afforded to about two ounces of thick fetid pus. He remained insensible, and the excretions were voided without his will.

12th. The pus, somewhat fetid; has been plentifully poured forth from the four openings, which have been kept open by pledgets of lint. The puncture made the day before yesterday in the palpebra, is found to communicate now with the wound in the forehead. Pulse feeble, and 130. To have his broth as before. and a grain of the bi-sulphate of quinine thrice a day.

14th. He appeared to know what was said to him, and the left eye, which he now opened and directed to any object, seemed to possess perfect vision. Made signs for the bed-pan. Discharge free. Delirium at night. The treatment continued.

16th. He evidenced by his acts more perception and intelligence. Discharge healthy and profuse. He took two grains of bi-sulphate of quinine every six hours. Allowed as much animal food as he wished.

17th. Much confusion, anxiety, and irritability of manner existed to-day. Frequent paroxysms of incoherence during the night. Pulse 130, and small. A quarter of a grain of acetate of morphia was ordered to be taken with each dose of the quinine.

19th. Was calmer. Discharge diminished. No incoherency. Treatment continued.

21st. Discharge gradually decreased. Labored under symptoms of fatuity, and replied only "yes," to any question. Had compresses applied to the right os frontis and to the occiput, (the incision near which had almost healed.) and adhesive plaster to the ball wounds. Continue the quinine and morphia. The bowels remained free, without the use of any purgative.

28th. Since last date, the wound at the occiput has healed; and the discharge is now slight from the other three.—Constitutional irritability has been much allayed. Slept and

ate well. Was quite idiotic, and constantly attempted to remove his bandages. Opened his right eye, of which the vision has been injured. The motor power only of the left side has been partially lost. The mouth is drawn to the right. He cannot project his tongue; and his endeavors to do so caused laughter. The doses of morphia and quinine were augmented respectively to half a grain, and three grains. Nitrate of potash, and nitric acid, were likewise prescribed. Compresses, &c., were applied as before.

March 5th. Some dawning of intellect was perceptible to day, and a word of rebuke had a temporary effect in checking his propensity to remove his bandages and destroy his bedclothes. Vision was perfect, and the axes of both eyes were simultaneously directed to any object. Has been disposed to speak. Urine passed in abundance. The exposed surface of the brain at the frontal wound has numerous small vessels traversing it, and it has put on the character of mucous membrane, yet without any attachment to the surrounding integuments of the forehead. Pulse large, and 100.

10th. Has decidedly improved in his mental capabilities, and has recognized his friends, including an officer who came to see him, and whose name he distinctly pronounced. When any question has been put to him with a caution, he has replied sensibly. The pieces of the right os frontis have consolidated with one exception, and an angle of a small fragment projects under the integuments at the upper part of the forehead. Contrary to my expectation, no pus has ever been discharged by the nose. The space between the edges of the fracture, posterior to where the ball entered, has closed, but in no way between that and the wound of the forehead. The discharge has been trivial. Two small squamæ of bone have been removed from the wound near the ear. Has walked a little with assistance. No improvement in the use of his left upper and lower extremities; they are employed at will, but feebly; their sensibility, however, has never been involved. The new membrane, remarked as covering the surface of exposed brain, has thrown out exuberant granulations, which have been with difficulty kept down to the level of the frontal teguments, by the liberal application of lunar caustic. Ordered to take, three times a-day, an ounce of compound infusion of gentian, half a grain of morphia, and four drops of muriatic acid. Compresses continued.

To render this report as concise as possible, I conceive I may, without any disadvantage to it, conclude by recording, that from this date, a progressive amendment to complete and

perfect restoration of the patient's health of mind and body took place, under a continuance of the treatment above noted. On the 3d of April he was discharged from the hospital. The vertex is permanently settled to the left side. The skull has not united for about two inches over the temple, where and at the cicatrix of the frontal wound, the pulsations of the brain can be conspicuously observed. A ridge exists where union has occurred in other parts of the fracture. The wound in front of the ear has closed with ossific matter. The right eye cannot be opened quite so widely as the left, and there exists some thickening of the orbital margin of the frontal bone. The right commissure of the mouth is but slightly retracted. His sleep is refreshing, his appetite hearty, his secretions normal, and he is fleshy and strong. His memory is tenacious, and he can summon to it any bygone event to which he has been a party, with accuracy and promptitude; and he is subject to no hallucination. In short, his senses of hearing, smell, taste, sight, and touch, have not been one tittle deteriorated by the violent and extensive nature of the injury to the brain.

He presents himself occasionally for examination; and he has just now paid me a visit. I cannot learn that his disposition has been in the least altered by his accident and consequent loss of cerebral substance. He is good-tempered and cheerful, which his friends say he has been from his infancy.—*Amer. Jour. of Med. Sciences.*

On the Expulsion and Extraction of the Placenta before the Child. By James Y. Simpson, M. D., F. R. S E.—All writers on Midwifery concur in the opinion that there is no circumstance more trying to the attendant, or more fatal to the parturient woman than the recurrence of hemorrhage from the presentation of the placenta. So high, indeed, is the mortality arising from this complication, that one woman in three perishes from it, a fatality which is as great as that of cholera, and more so than that of the dangerous capital operations. Such being the case, any attempt, as in the memoir before us, to diminish the fearful risk attendant upon placenta prævia, is, in the words of the author, "at least entitled to the consideration of the obstetric profession, even should it fail to secure their concurrence and convictton."

The principles of treatment in cases of placental presentation hitherto pursued may be reduced to two:—that which has

been supposed to be chiefly applicable in *partial* presentation, namely, rupture of the membranes; and that which meets with more general approbation, and has been generally considered indispensable in severe "unavoidable hemorrhage," namely, turning. To these Dr. Simpson proposes to add a third—the *complete separation*, and *extraction*, if *necessary*, of the *placenta before the child.* He has been induced to offer this suggestion, from the circumstance, on one hand, that the most serious hemorrhage always occurs when the placenta is only partially detached; and on the other hand from the fact which he establishes upon the evidence of an extensive and well-arranged table of cases, "that when the placenta, in unavoidable hemorrhage, is once *completely* separated from its connexions with the interior of the uterus, the accompanying flooding in general entirely ceases, or becomes moderate in quantity." It virtually appears, from the examination of the table alluded to, that in 5 only of 111 cases in which the extraction of the placenta preceded the expulsion of the child, did the hemorrhage continue so profuse as to be considered alarming by the attendant.

Dr. Simpson displays the value of his new mode of treatment by a comparison of the mortality under it, and that which occurs under the usual method. It has already been stated that in unavoidable hemorrhage treated by turning the deaths are as 1 to 3. Among the 140 cases tabulated by Dr. S. 10 were fatal or 1 in 14. These figures, therefore, show a striking preponderance in favor of the new plan, but favorable as it is under this point of view, it becomes still more so by an investigation of the circumstances attending the death of the 10 fatal cases. Four of these died several days subsequently to delivery, so that they obviously did not die directly from the effects of hemorrhage; and in three others, one died from the consequences of her husband's brutality, and the two remaining from causes unconnected with the placenta, so that, as Dr. S. observes, in 141 cases the deaths are reduced to 3, or 1 in 47.

In the conclusion of this interesting paper the author draws the following deductions:

1. That the *complete* separation and expulsion of the placenta before the child, in cases of unavoidable hemorrhage, is not so rare an occurrence as accoucheurs appear generally to believe.

2. It is not by any means so serious and dangerous a complication as might *à priori* be expected.

3. In nineteen out of twenty cases in which it has hap-

pened, the attendant hemorrhage has been either at once altogether arrested, or it has become so much diminished as not to be afterwards alarming.

4. The presence or absence of flooding after the complete separation of the placenta, does not seem in any degree to be regulated by the duration of time intervening between the detachment of the placenta and the birth of the child.

5. In 10 only out of 141 cases, the mother died after the complete expulsion or extraction of the placenta before the child.

6. In 7 of these 10 casualties, the death of the mother seemed to have no connexion with the complete detachment of the placenta, or with the results arising directly from it, and if we do admit the three remaining cases, which are doubtful, they would still only constitute a mortality of 1 in 47 cases.

7. On the other hand, under the present established rules of practice, the deaths in placental presentation are as high as 1 in 3.—*Lond. and Edin. Jour.—Ranking's Abstract.*

On the Distinction between Infantile Diseases depending upon Inflammation and those which arise from Irritation. By P. Hood, Surgeon, &c.—The importance of distinguishing between the symptoms of inflammation and irritation cannot be too strongly urged. Every practitioner must have experienced the disappointment which sometimes attends his best endeavors to relieve a suffering child, and been apprehensive of his remedies, more especially when he has had any doubt as to the cause of the disease. But by bearing in mind that morbid irritation exerts a powerful influence over the diseases of children, then treatment becomes more simple, and greater confidence is acquired. This consideration will in a great measure prevent the very common occurrence of the prostration of the strength of the child, at the onset of its disease, by the use of exhausting and lowering remedies. It will lead the practitioner to observe that children's diseases are not so speedy in their termination as is generally supposed, and that where he has hesitated to abstract blood, and has used more lenient means he has been rewarded; that the child, so far from sinking from want of blood-letting, has not only survived, but has proceeded rapidly to recover its health; while under contrary treatment, if it survived at all, its convalescence has been slow and protracted.

The practice of bleeding and leeching is inadmissible in diseases having their origin in morbid irritation. The only instances in which I have ever observed blood-letting and leeches borne with comparative impunity as remedies for what are termed the inflammatory diseases of childhood, have been at the earliest period of the attack, and when the greatest possible care has been taken to limit the quantity of blood taken. But even in these cases I have observed that the children long looked pale and sickly, and that some of them sunk under a renewal of the disease, to which the treatment adopted appeared to render them more liable.

The treatment most successful in allaying irritation comprises emetics, sedatives, and stimulating embrocations, when the lungs are attacked; sedatives, and aperients of a well-regulated strength, with febrifuge medicines when the brain is the seat of the disorder.—*Ibid.*

Statistics of Suicide in France.—The number of suicides in 1843 amounted to 3020; which surpassed that of 1842 by 154; of 1841, by 206; of 1840, by 263; so that there has been a regular increase during the last three years. The distribution of suicides in the different departments is as follows:

Seine, - -	551	Somme, - -	71
——et Oise, -	113	L'Herault, - -	13
——Inferieure,	112	Haute Garonne,	12
Marne, - -	101	Le Gard, - -	23
Nord, - -	80	La Gironde -	26
L'Aisne, - -	78	L'Isre, - - -	30
Seine et Marne,	75	Rhone, - -	44

Of these there were of females, 729, or 24 in the 100. We remark also, 15 of children under 16 years of age; 20 octogenarians; 170 septuagenarians; and 384 sexagenarians. The months most prolific in self-destruction were May, June and July. The most common mode of death was drowning: 1098 adopted this; 954 hanged or strangled themselves; 450 used fire-arms; and 206 destroyed themselves with the fumes of charcoal. Of these latter, 151 were of the department of the Seine, in which Paris is situated. The motives were mostly disappointed love, jealousy, the consequences of debauchery, reverse of fortune, domestic sorrow, and physical suffering. One quarter of them were not of sound mind at the time.—*Revue Medicale.—Ibid.*

THE WESTERN JOURNAL.

New Series.—Vol. V.—No. III.

LOUISVILLE, MARCH 1, 1846.

KENTUCKY LUNATIC ASYLUM.

We believe it is admitted, on all hands, that the Lunatic Asylum, at Lexington, does not meet the wants of the community, and is deficient in many things necessary to the comfort and successful treatment of the insane. These defects are pointed out in two communications to the Legislature, which have been placed on our table;—one the "Annual Report of the Directors and Physician;" the other a "Memorial, by Miss D. L. Dix, soliciting an appropriation" for the asylum, "and also urging the necessity for establishing a new hospital in the Green river country." We fervently hope that this prayer may be granted, and that the funds solicited with reference to extending the buildings, and augmenting the means of rendering the patients comfortable, will be placed in the hands of the board of directors without delay. It would be unworthy of legislators in this enlightened age to hesitate about such an appropriation when such interests are at stake. The asylum can never become what such an institution ought to be; especially, it can never produce the delightful results now everywhere looked for from retreats for the in-

sane—the recovery of a large proportion of recent cases of insanity, —without substantial changes and improvements, to effect which the institution must have funds. Kentucky is not satisfied with her lunatic asylum. It does not hold out sufficient inducements to the friends of deranged persons to send them early to the hospital, and thus the period most favorable to a cure is allowed to pass away. Owing to this cause, and others enumerated in the report of the physician, our asylum has not kept pace with other similar institutions, which, from their signal success in restoring the insane to reason, are estemeed among the chief glories of our age.

We heartily approve of the policy of establishing in Kentucky another asylum for lunatics, but it occurs to us that the site for it is Louisville. Not only is Louisville the point most accessible from all parts of Kentucky, but its position on the river would attract the insane who were able to pay from the States of Indiana, Illinois, Arkansas, and Mississippi. Indeed, as several of those States have yet no lunatic hospital, it is probable that their legislatures might be induced to unite with Kentucky in the establishment, at Louisville, of an asylum which should be open to all. In this way, States which may not be able for many years to erect their own hospitals, would have at once a retreat for this unfortunate class of their population. At Louisville the best professional skill could be secured, while its constant and quick communication with all parts of the Mississippi Valley, would afford opportunities for sending the insane to the hospital at an early stage of their disease, a circumstance of the utmost importance since the chances of cure, it is well understood, diminish with the duration of the insanity.

The public are waking up to a sense of their obligations to this class of the afflicted. We are beginning to feel, that lunatics have claims upon our sympathies, and ought to be treated with gentleness and kindness—not locked up, like criminals, in common jails, or dreary houses built expressly for their confinement, to swelter in filth, and be devoured by vermin. But what is done with them where there are not retreats in which they may be made secure, and provided with the comforts of life? The answer "would a tale unfold" too disgusting for the ears of polite society.

LATIN PRESCRIPTIONS.

We think we perceive pretty clear indications that Latin prescriptions, in the United States at least, are going out of vogue. They are still defended by a few, but the great majority of physicians feel that they are a relic of the pedantry of ancient times, when medical books were written, and medical correspondence and examinations carried on in Latin. They are ridiculous; because, as a general rule, they are neither Latin nor English, but a mongrel of the two. They are hurtful to the profession, by maintaining about it that air of mystery and mummery which rendered it, for long ages, the butt of the world. It must be the wish of every sensible man to see it divested of every thing that bears any semblance to humbuggery.

THE BROCCHIERI STYPTIC.

Our readers have seen notices in the public prints of the Brocchieri water, the styptic powers of which are reported to be equal to any hemorrhage. The carotids of a sheep having been cut, the spouting blood was at once checked by the application of a few drops of the water on a little of the animal's wool. There appears to be something magical in it; but the incredulous profession, as usual, turn a deaf ear to these reports. Dr. Mott says he knew Brocchieri in Paris, and that he was a notorious charlatan. A writer in the Boston Medical Journal compares his "water" to Don Quixote's "balsam of Frierabras," and concludes that the modern remedy was outdone by that of the knight, the virtues of which he thus sets forth to his friend Sancho: "It is a balsam of which I have the receipt by heart, and he that has it need not fear death, nor so much as think of dying by any wound. And therefore, when I shall have made it, and given it to you, all you will have to do is, when you see me in some battle cleft asunder, (as it frequently happens,) to take up, fair and softly, that part of my body which shall fall to the ground, and, with the greatest nicety, before the blood is congealed, place it upon the other half that shall remain in the saddle, taking especial care to make them tally exactly. Then you must immediately give me to drink only two draughts of the balsam, and then you will see me become rounder than any apple."

This wonderful secret was lost, and when men were beginning to felicitate themselves that it had been restored in the "*aqua Brocchieri,*" their visions were put to flight by the assurance that the remedy was "*too costly for general use.*"

MEMPHIS MEDICAL SCHOOL.

The papers of Tennessee announced, some time ago, that a charter had been obtained for a Medical School in Memphis. A few days since we saw a letter from a physician of that city, from which it appears that arrangements are in progress for putting the School into early operation. He spoke of having obtained a charter, but did not mention who were to be his associates in the enterprise. Memphis promises to become a great city at some future day, and doubtless will be the seat of a flourishing school of medicine. The immediate success of the projected institution will depend upon the character and extent of its equipments.

VACCINE APHORISMS.

Vaccination, at the present time, is attracting an unusual share of public attention, from the circumstance that small pox has obtained a very uncommon prevalence. We adverted to this fact in our last number. Since that time several cases of the disease, but no fatal ones, we believe, have appeared in this city, and we learn that it continues to prevail, in a modified form, in the Atlantic cities. The following aphorisms, copied by the Boston Medical and Surgical Journal from a New Hampshire paper, are sanctioned by medical men the most experienced in vaccination. We have no doubt they will be acceptable to our readers:

"1. A 'scar' of the cowpox, having all the characteristic marks, and perfectly distinct, is not to be relied upon as an evidence of certain protection, unless proved by re-vaccination.

"2. *Complete* vaccination forever secures an immunity to the individual from infection of the smallpox, varioloid, and from specific effects of cowpox.

"3. In primary successful vaccinations, there is little evidence of the operation of the virus before the fifth or sixth day, while in subsequent vaccinations, if the first be *complete*, there is speedy inflammation and itching, and the whole disappears at about the time that the first should distinctly appear.

"4. The most rigid scrutiny is requisite in the selection of matter, that it be collected at the right period of the vesicle, and from individuals of robust health, free from any cutaneous or other disorders, and of these conditions the physician is the only competent judge.

"5. Cutaneous diseases (as perhaps visceral and other disorders,) seriously modify the character of the genuine vaccine affection, both as it regards the purity of the virus, for transferring the disease, and also the degree of security afforded the vaccinated, in consequence of impaired susceptibility.

"6. *Re-vaccinate in all cases*, and repeat the operation so long as it specifically affects the system."

MEDICAL CLASSES.

From the published catalogues, we learn that there were last winter in the Willoughby Medical School 164 students, in the Medical Department of Transylvania University 170, in the Ohio Medical College 192, in the Medical Institute of Louisville 345, in Jefferson Medical College 469, and in the University of Pennsylvania 471. We hope the deans of faculties of the several other schools will forward to us catalogues so soon as they are published.

TRANSYLVANIA UNIVERSITY.

The dean of the medical faculty of Transylvania University announces the appointment of Professor Annan, of Baltimore to the chair of Obstetrics, made vacant by the death of Professor Richardson, and that of Professor Bartlett to the chair of the Theory and Practice, which he resigned two years ago. That chair, it is stated, became vacant in consequence of the impaired health of Prof. Watson. Professor Bartlett is now in Europe, but his acceptance is spoken of in the Lexington publications as certain. For the chair to which Dr. Annan has been elected, it is reported that there were forty-nine applicants.

FACTS FROM CORRESPONDENTS.

PECULIAR MORBID EFFECTS FROM QUININE.

We are indebted to Wm. H. Gardner, M.D., of Munfordsville, Ky., for the following communication. It may be a question whether it was the opium or the quinine that gave rise to the unpleasant symptoms in the cases related; but the cases are instructive, as showing that alarming effects sometimes attend the administration of these articles.

"I am in the habit of treating our simple autumnal intermittent and remittent fevers with an emetic, if called in the first instance, followed by a cathartic; and after evacuating the stomach and bowels fully, my practice is to arrest the paroxysm by quinine, opium, and ipecacuan combined. I give the quinine in doses varying from three to twelve grains, repeated every four or six hours, combined with from one to three grains of opium, and as much ipecac. This course I have found altogether satisfactory, pretty uniformly arresting the fever by the second or third day. I have never known any bad effects from the quinine when thus administered, except what seemed to be exhibited in the following cases:

Aug. 3d. Called to see Mrs. H., aged 60, of stout constitution; has had a regular paroxysm of fever every day during the last week; had a well marked chill this morning, followed by fever, which lasted nearly all day—she is now (evening) perspiring moderately. Has taken two doses of some purgative pills, which she says have acted well. Says she has enjoyed good health all her life, with the exception of an occasional attack of cramp colic, to which she has been subject many years. Says she cannot bear the least portion of opium or quinine; that she once took some powders which contained quinine and opium, and that they "were near killing her." To all this I was incredulous, and as the paroxysm was expected next morning, I

made the following prescription: ℞ Sulph. quinine, 16 grs., sulph. morphine, 2 grs., ipecac., 4 grs.—make into 8 pills with crumb of bread. I gave two of the pills at once, and sat down to wait their effects, intending to repeat every four hours. In twenty minutes after the pills were taken, she complained of slight nausea; in a few minutes more of cramp and pain at the stomach, which became so severe as to make her call for relief; and in less than 20 minutes from the time she first complained of the nausea, she was pulseless, speechless, and looked ghastly as death. She had a peculiar convulsive, gasping, retching, indicative of something very poisonous at the stomach. With much difficulty I poured down her a glass of warm water, and repeated it every few minutes with ipecac. dissolved till free vomiting was induced. The symptoms were now allayed to some extent for a time, but returned again with violence, and it was not till after vomiting a third or fourth time that she seemed to be permanently relieved, and went to sleep. Next morning she complained of severe soreness in the epigastrium, but missed her chill. A dose or two of calomel and rhubarb completed the cure.

I have seen a similar effect produced in only one other case—that of a young man to whom I gave 8 grs. of quinine and 10 grs. Dover's powder, to prevent a paroxysm which was expected in two hours. In a few minutes after the exhibition of the medicine most of the unpleasant symptoms enumerated in the above case came on, but not to so great an extent. Vomiting speedily induced by warm water and ipecac. relieved him.

It is proper, however, to add that I have since given this individual quinine and opium in large doses without any bad effect whatever.

Feb. 1846."

THE AMERICAN JOURNAL OF SCIENCE AND ARTS.

We direct the attention of our readers to the prospectus of the *American Journal of Science and Arts*, which they will find on the cover. No periodical publication in America has done so much for the scientific reputation of our country as this Journal, and for this reason it has claims upon every man who loves his country. But it has other and peculiar claims upon all who love science. We trust it will find many subscribers among the readers of the Western Journal.

Meteorological Mean, for the half year ending December, 1845.

BY B. F. MEEK AND A. J. MUNSELL.

Station, Frankfort, Ky.—Lat. 38° 14′ *N. Long.* 7° 50′ *West from Washington.*

MONTHS.	BAROMETER.						Thermometer						Uranoscopia.			Dew-point					Pluviometer.		
	Sun rise.	2 o'clock, P.M.	Sun set.	Maximum.	Minimum.	Range.	Sun rise.	2 o'clock p.m.	Sun set.	Maximum.	Minimum.	Range.	Clear.	Cloudy.	Variable.	Sun rise.	3 o'clock p.m.	Maximum.	Minimum.	Range.	Rainy days.	Max. Rain.	Quantity.
July,.....	29.65	29.61	29.64	29.85	29.25	00.60	75	82	78	90	68	22	0	2	29	67	73	74	48	26	5	.50	1.70
August,.....	29.71	29·69	29.70	30.05	29.45	00.60	73	81	78	88	58	30	0	3	28	67	73	80	55	25	10	1.25	7.45
September,.....	29.77	29.73	29.73	30.05	29.35	00.70	62	78	74	86	46	40	1	1	28	58	67	76	42	34	6	3.25	7.25
October,.....	29.99	29.93	29.85	30.48	29.42	01.06	47	66	60	76	34	42	4	2	25	48	55	68	35	33	8	1.25	5.80
November,.....	29.79	29.74	29.56	30.35	29.07	01.28	37	53	49	68	12	56	1	3	26	36	45	55	30	25	7	1.50	5.65
December,.....	29.96	29.90	29.90	30.47	29.10	01.37	20	32	28	50	-2	52	5	10	16	35	39	46	34	12	3	.25	.55
S. A. Mean,....	29.81	29.77	29.73	30.21	29.27	00.93	52	65	61	76	36	40	11	20	153	52	59	66	41	26	39	1.67	28.40

The days marked "clear" and "cloudy" were entirely so during the twenty-four hours. The Barometer and Thermometer, were suspended in the shade with a Southern exposure. The Dew-point is the highest temperature at which the vapor in the open air will condense upon a bright metallic or thin glass tumbler of water, cooled down by ice or pulverized hydrochlorate of ammonia and nitrate of potash in equal quantities. It was carefully ascertained.

1846 Oct.

THE WESTERN JOURNAL OF MEDICINE AND SURGERY.

EDITORS.

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PROFESSOR OF PATHOLOGY AND THE PRACTICE OF MEDICINE
IN THE MEDICAL INSTITUTE OF LOUISVILLE:

LUNSFORD P. YANDELL, M. D.,

PROFESSOR OF CHEMISTRY AND PHARMACY IN THE SAME:

THOMAS W. COLESCOTT, M. D.

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THE

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OF

MEDICINE AND SURGERY.

APRIL, 1846.

ART. I.—*Letters from Europe.* By JAMES C. CROSS, M. D., late Professor of the Institutes of Medicine in Transylvania University.

PARIS, December, 1845.

GENTLEMEN:

Syphilitic Sarcocele. (Clinic of M. Ricord.)—Syphilitic Sarcocele—Syphilitic Testicle has been the object of much investigation and study, but these do not remount to a very remote period. Astruc had a glimpse of its nature, but he confounded it with blennorrhagic orchitis; Bell was perfectly familiar with it, but Hunter has not even mentioned it. Before the time of Sir Astley Cooper, and even more recently, that of Dupuytren, a satisfactory description of it is not to be found. Syphilitic sarcocele, to which the name of syphilitic albuginitis is still applied ,and with reason, for the white tissues are those that are first attacked, is one of the most common and early of the occurrences that are observed in the tertiary period of constitutional pox, and generally attacks one side only.

However, it is not uncommon to see it invade both, either simultaneously or successively. Rarely ever is its existence announced by such symptoms as lead to the apprehension that the testicle will be lost; nevertheless, sometimes in some very rare cases we meet severe, piercing pains, most commonly during the night, in the lumbar region. The patients then complain of a sensation of painful pressure near the kidneys: it seems to them, they say, that a piercing instrument was thrust into the flesh. In some cases the pains assume the character of those that are syphilitic, being experienced during the night, but it is very rare that we find such prelusive symptoms. Generally patients are wholly ignorant of the precise period at which their disease commenced, and commonly it is accident that causes its existence to be made known to them. Sometimes it, however, happens that individuals experience in the testicle a sensation of uneasiness, malaise and dull pain, which directs attention to the part before any appreciable change can be discovered. Commonly the disease commences with a material alteration in the organ diseased without there having been experienced either lumbar or testicular pains. When we attend to the gradual development of the disease the following is what is observed. We find upon a point of the body of the testicle, for it is in the body of the testicle itself that the disease generally commences, and it is but a small portion of the body that it occupies, one or more small indurated nodules;—when the organ is touched carefully a point that resists pressure is felt—which has lost its suppleness—that normal elasticity which is preserved in other parts of the organ. As the disease progresses the resisting points are gradually extended very much in the manner that the bones of the cranium are ossified. In many cases the induration extends in the form of circles, and these in spreading become confounded with one another until ultimately the whole testicle is involved. According as the organ is invaded it loses its elasticity and hardens and concretes. The only difference between what takes place in this affection and inflammation of the testicle consists in the slow

and chronic manner of the concretion in the former, while all the phenomena that mark its progress are independent of inflammation. In typical and regular cases the epididymis is not involved in the diseased action, and for a considerable time during the progress of the disease it may be readily enough distinguished from the body of the testicle which progressively hardens and either presents its normal volume or becomes hypertrophied. One of the characteristics of syphilitic testicle is that it preserves its normal size, and this circumstance which was first signalised by M. Ricord, has induced some writers to believe that this organ was becoming atrophied. There takes place here a phenomenon analogous to that which is observed in those cases of cancer known under the name of *cancer rentrant—cancer concentrique.* In this kind of degeneration where it attacks the breast for example, it imparts to the tissues a horny hardness and causes the nipple to be retracted within them. The same mechanism may be observed in this disease, but it should be remarked that most frequently as the alteration progresses hypertrophy of the testicle supervenes and the organ doubles or triples its ordinary volume. But even in those cases where this takes place the development of the organ is confined within certain limits, while some degenerations of the testicle impart to it a most enormous magnitude. In this disease the augmentation of volume has limits, and this it is important to know, as it will be found essential to a precise diagnosis. When there is an increase in the size of the tumor the augmentation is commonly uniform. This is seen when the albuginitis becomes general; the organ preserves its pyriform appearance—the large extremity being below and the summit more or less elongated extends in the direction of the testicular cord. Syphilitic testicle is not knobbed or knotty—its hypertrophy is regular, and should any inequalities in its surface be detected it will be observed that they present a kind of regularity—they are arranged in zones and not mammillated. When the tumor has acquired three or four times the normal volume of the testicle, if it is examined with attention, the epididymis can be no longer

Meteorological Mean, for the half year ending December, 1845.

BY B. F. MEEK AND A. J. MUNSELL.

Station, Frankfort, Ky.—Lat. 38° 14′ *N. Long.* 7° 50′ *West from Washington.*

MONTHS.	BAROMETER.						Thermometer						Uranoscopia.			Dew-point					Pluviometer.		
	Sun rise.	3 o'clock, P.M	Sun set.	Maximum.	Minimum.	Range.	Sun rise.	3 o'clock p.m	Sun set.	Maximum.	Minimum.	Range.	Clear.	Cloudy.	Variable.	Sun rise.	3 o'clock p.m	Maximum.	Minimum.	Range.	Rainy days.	Max. Rain.	Quantity.
July,.....	29.65	29.64	29.64	29.85	29.25	00.60	75	82	78	90	68	22	0	2	29	67	73	74	48	26	5	.50	1.70
August,.....	29.71	29.69	29.70	30.05	29.45	00.60	73	81	78	88	58	30	0	3	28	67	73	80	55	25	10	1.25	7.45
September,.....	29.77	29.73	29.73	30.05	29.35	00.70	62	78	74	86	46	40	1	1	28	58	67	76	42	34	6	3.25	7.25
October,.....	29.99	29.93	29.85	30.48	29.42	01.06	47	66	60	76	34	42	4	2	25	48	55	68	35	33	8	1.25	5.80
November,.....	29.79	29.74	29.56	30.35	29.07	01.28	37	53	49	68	12	56	1	3	26	36	45	55	30	25	7	1.50	5.65
December,.....	29.96	29.90	29.90	30.47	29.10	01.37	20	32	28	50	-2	52	5	10	16	35	39	46	34	12	3	.25	.55
S. A. Mean,....	29.81	29.77	29.73	30.21	29.27	00.93	52	65	61	76	36	40	11	20	153	52	59	66	41	26	39	1.67	28.40

The days marked "clear" and "cloudy" were entirely so during the twenty-four hours. The Barometer and Thermometer were suspended in the shade with a Southern exposure. The Dew-point is the highest temperature at which the vapor in the open air will condense upon a bright metallic or thin glass tumbler of water, cooled down by ice or pulverized hydrochlorate of ammonia and nitrate of potash in equal quantities. It was carefully ascertained.

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mation des cellules. We are told that if the tissues of animals are studied in the germ we shall see that they are in great part composed of cells as are those of vegetables. From the moment that it was demonstrated that the cell constituted the base of all the organised tissues, that it is, as it were, their integral molecule, the greatest importance was attached to the mechanism of its formation. M. De Mirbel was the first to institute an inquiry into the manner in which the cell proceeds from the cambium to form its parietes at the expense of this mucilage. When he cut the extremity of a root of the date-tree, he saw in the mucilaginous substance discharged a multitude of irregularly spheroidal masses that evidently resulted from the concentration of the mucilage, which in each condensed mass, exhibited already the first rudiments of a proximate organization. In the centre of each mass there is soon formed a cavity that gradually increases in size by pressing upon the matter by which it is surrounded and which serves to limit it. This matter thus pressed upon is attenuated into the form of a membrane by the dilatation of the central cavity, and ends by representing a hollow sphere which is nothing more than a vesicle. To this theory, M. Coste opposed that of Schleiden, applied by Schwann to the organization of animals, and which is merely a generalization of the theory of Purkinje on the development of the egg in the ovary. Having recognized that the germinative vesicle was the part of the egg which, from the commencement has the greatest proportional development, Purkinje considered it as a centre around which is successively deposited the vitellus and vitelline membrane, which coagulating in its turn at the periphery of the yolk, completed the ovarian egg. This successive encasement of the concentric parts having appeared to Schleiden and Schwann as the most simple means that could be conceived of the formation of the vesicular parietes, they constructed upon it a general theory to explain the development of the vesicle. Before we pronounce upon the respective merits of these theories, let us hear what M. Coste has to say

on the subject, as he has promised soon to give us his own views which we doubt not will at least assume to be novel.

Etiology of Goitre.—On the same occasion, M. Guyen, Chief Surgeon of the Army in Africa, made a communication on the causes of Goitre. He contends that it cannot with truth be referred to a low temperature—to the nature of the water, or the humidity of the atmosphere. He alleges that the causes assigned are wholly insufficient to explain the production of a disease that prevails in so many places, and which everywhere exhibits the same characteristics. The cause of Goitre, according to M. Guyen, is the imperfect and insufficient exposure to the sun of those localities in which it prevails. In support of this opinion he quotes the observations made by Fodere, that Goitre is not found in elevated situations nor in open plains, but in the deep and narrow gorges of mountains. He explains the presence of this disease in Lyons by referring it to the fact, that that city does not enjoy the benefit of the rays of the rising sun in consequence of a mountain in its vicinity, which runs from the North to the South. Although it may be true that Goitre is prevalent in localities secluded from the full power of the sun, and even more prevalent in such localities than in those differently situated, the theory of M. Guyen is far from satisfactory, for Goitre is common on the Andes—in countries perfectly dry and exposed in the fullest extent to the sun.

Aneurism cured by Galvano-Puncture.—M Petrequin has made a publication on this subject, of which the following is a summary analysis. The author states that when we consider the danger which an operation for aneurism involves, any safe means by which we may dispense with it, must be considered a great conquest. The following are some of the results of his analysis of the operations that have been performed for this disease, when affecting the principal arteries. He thinks, one-sixth at least, of those operated on for aneurism of the crural and primitive carotid die; of the external

iliac, one-fourth; of axillary and subclavian, one-half; of the branches of the brachio-cephalic trunk, two-thirds, &c. This being the case, we may form some idea of the value of a process not only more simple, but one devoid of danger. The application of electricity, says M. Petrequin, has been suggested, but no advantage has resulted from it, and all that the science furnishes on the subject is to be found embodied in the following lines written by M. M. Marjolin and Berard, in 1833. "They have endeavored to induce a coagulation of the blood in the sac by electricity transmitted through needles plunged into the tumor. *This idea*, which originated with M. Pravaz, has not yet, to our knowledge, been reduced to practice." To satisfy himself on the subject, Petrequin addressed Pravaz, from whom he learned that it was nothing more than a speculative thought which researches on another subject had inspired, and that he had never performed experiments on man or animals to test its practicability. Petrequin experimented upon human blood immediately upon its abstraction, and the results obtained were so satisfactory as to induce him at once to make application of it to the cure of aneurism. The case in which it was first employed and with success, was a traumatic aneurism of the temporal artery of the size of an almond, of a soft consistence and slightly sensible on pressure. Every precaution was taken to determine the precise nature of the tumor, and that it was aneurismal there could not be the least doubt. In the presence of many persons two fine, sharp steel pins were plunged into the tumor about four-fifths of an inch, in such a manner as to cross at right angles. A communication was established between the heads of the pins and the poles of a pile. The first instant of contact produced a shock and severe pain which went on increasing as the galvanism was augmented, until they became so intense as to render it necessary to suspend the sitting. The duration of the galvano-puncture lasted about 10 or 12 minutes, and in that time the direction of the galvanic current was changed three times. During the operation the pulsations progressively diminished, until at length they ceased entirely. The pul-

sating aneurism was replaced by a solid and hard tumor, which at the expiration of ten days, was being gradually absorbed. This cure was considered radical. Now, M. Petrequin thought that he had fully established the priority of his claim to having first practised galvano-puncture for aneurism when he consulted Pravaz and obtained from him the assurance that he had never tried it; but he was mistaken. At a meeting of the *Academy of Sciences*, on the 8th inst., we were surprised, if not amused, to find that a letter had been received from Mr. B. Phillips, of London, who claims over M. Petrequin, of Lyons, the priority of the employment of galvano-puncture in cases of aneurism. The profession will doubtless rejoice to learn that they are not disputing over the skin of the bear before the bear is killed.

Chemistry.—At the meeting of the *Academy of Sciences*, on the 8th inst., we heard, with great interest, a communication read by M. Dumas, on behalf of M. Gehrarde, Professor of the Faculty of Sciences of Montpelier. This article treated of one of the highest and most difficult questions of modern chemistry, and as it professed to have for its object the enlightenment of a point that had engaged the close attention of the ablest men who have made this branch of learning a subject of special study, it could not fail to inspire the greatest interest. His experiments, a detailed account of which was embodied in the communication made by M. Dumas, were instituted to ascertain the atomic weight of Chlorine. When different bodies combine it is admitted that they are composed of molecules or atoms. Chemists have determined the weight of these molecules and have found that they vary in the different elementary bodies, and that the atomic weights of all bodies are exact multiples of hydrogen. That the atomic weight of carbon is exactly six times; that of azote fourteen times; that of sulphur sixteen times that of hydrogen; and now M. Gehrarde asserts the atomic weight of Chlorine is exactly thirty-six times that of hydrogen. This being the case, it is satisfactorily proved that these weights are not arbitrary, but

regulated upon a principle that is fixed and universal. Protracted and very carefully instituted researches had been prosecuted by M. Dumas to establish this fact, and he succeeded in showing that all the bodies that had been studied, with the exception of Chlorine, were subordinate to it. This exception, however, was fundamental and threatened the overthrow of the opinion maintained by M. Dumas and his followers, more especially as it rested upon the experiments of such men as Berzelius, Marignac and Pelouze, who always decided its atomic weight to be 35.3 or 35.5, that is to say, a fractional number being neither 35 nor 36. M. Gehrarde, unappalled by the difficulty of the subject, and unalarmed at the danger of a contest with names and researches that are justly honored as classical, examined the processes employed by his illustrious predecessors, and detected a source of error which had escaped their attention. His experiments, which are regarded as decisive, makes the atomic weight of Chlorine 36, and is therefore the exact multiple of the atomic weight of hydrogen. The problem may consequently be considered as solved, and the opinion maintained by M. Dumas and his followers, seems destined to triumph over that of Berzelius, which has so long prevailed

Amphioxus.—Some zoologists apply their exclusive attention to the completion of the great catalogue of living beings, and to point out the means by which the species may be distinguished from one another, while others, curious to know the secrets of natnre, have devoted themselves more particularly to anatomical and physiological researches—they have sought to discover how life, considered under the two-fold relation of its manifestations and instruments, is modified in the different animals, and they have therefore directed their observations especially to those points which seem best calculated to reflect light upon the laws of animal organization. Like the cavern of Rasselas, which opens to the most beautiful landscapes, a future, brilliant with the most magnificent discoveries awaits this *ecole physiologique*, of which, in France,

Milne Edwards is the distinguished representative, and to which M. De Quatrefages belongs, to whose researches on the *Amphioxus* we would direct attention. The *Amphioxus* had been already seen by the celebrated Pallas, but having at his disposition animals only which were preserved in alcohol, he took it for a *Limas.* It was found by M. Costa, at Naples, and judging from its external characteristics only, he decided it to be a fish. The fact, however, is that the *Amphioxus* is scarce more of a fish than a limas—it scarcely deserves to be placed in this great branch of the vertebrata, and yet it is impossible to class it amongst the invertebrata. It has, properly speaking, no brain—the cranium is wholly wanting—it has no heart—its blood is white and devoid of the globules so characteristic of the superior animals. To give an account of the relations which connect the whimsical organisation of the Amphioxus with the rest of the animal creation, it seems necessary to admit the truth of some of those ideas which modern science appears daily to render more and more reasonable, but which are obstinately rejected by many able and learned men. In other words, we must admit that the *Amphioxus* is a degenerated vertebral—that while its anatomical structure is simplified it still preserves some of the characteristics of the animals of this type. The characters which persist are found in the vertebræ before they become fully developed, and therefore, if the expression may be used, it may in this respect be denominated a permanent embryo. Already Muller, the great German physiologist, had made a voyage of the Baltic Sea for the express purpose of studying in the living Amphioxus this vertebral, which in so remarkable a manner differs from all others, and he published a work embodying the results of this investigation, which by naturalists is thought to posses very high interest. M. Quetrefages found the Amphioxus at Messina, not far from the famous gulph of Charybdis—he reviewed the observations of Muller—confirmed them on many points, and completed them on others. He detected the existence of several nerves that had escaped the attention of his predecessor—he has verified the existence of

real eyes, which he found deeply embedded in the substance of the tissues, and has exhibited the singular structure of what we would call the cellular tissue. We might give more details, but these are sufficient to impart a clear idea of the Amphioxus, while it cannot fail to strike the reflecting physiologists how forcibly its study illustrates how very fallible must be those general conclusions and laws that have been deduced from the study of the superior animals exclusively.

Variola modified by Vaccination.—A young man, 18 years of age, was attacked with small-pox in Bouillaud's ward, in the Hospital of Charity, after having experienced for four days only the precursory symptoms. He was vaccinated the first day by means of twelve or fifteen pricks in each arm. The variolic eruption went through its stages with great rapidity and without secondary fever. When desquamation commenced the vaccine disease which had remained in a perfectly latent state, was developed, and in its turn went through its stages with great rapidity, which demonstrated it had also experienced some modification. This remarkable fact proves that when variola attacks persons not vaccinated, vaccination is proper and may be useful if only occasionally, not only during the primary fever, but even at the commencement of the variolic eruption.

Resuscitation after submersion for half an hour.—In the *Journal de la Corse* a case is recorded with the utmost minuteness and detail of a woman who was completely resuscitated after being under water for the space of full half an hour. Of the truth of this, from the testimony adduced on the occasion, there could be but little doubt; but as the circumstances of submersion and ultimate recovery are to be found only in a political and not a medical publication we shall not trouble you with the details. The case, however, is in some degree interesting, and may excuse the propounding of some questions. If true, how did she survive through the half hour of submersion? Was it owing to a state of asphyxia which su-

pervened before falling into the water? Was it because the communication between the ventricles of the heart were not completely closed and that the circulation continued as in the fœtus in utero? Is it possible for a human being, after the establishment of extra-uterine life, to live for the space of half an hour without breathing? The case is certainly extraordinary, and, we believe, unique of its kind.

ART. II.—*An Essay on Diet in Health and Disease.* By JOHN DAWSON, M. D., of Jamestown, Ohio.

Among the many inquiries of the physician, none, perhaps, is less free from perplexity, than the one which it is the design of this paper partially to discuss.

The proper diet of man, considered either in relation to health or disease, has been, and is, to some extent at the present time, surrounded with considerable confusion. Until recently the only test to which it had been with any success subjected, was the experience of different individuals upon their own persons or upon inferior animals. It is true, that reference, in order to determine the diet most suitable, has been frequently made to the habits of those uncultivated races living in the extreme North; and also to those living in the South, in the hope that something might be elicited that would minister to a more correct understanding of the subject. As yet, however, these imagined sources of information, although invoked with considerable industry, have failed to furnish facts of any other character than those of secondary importance. Nothing has been learned from the habits of the Esquimaux, Samoiedes, &c., who live exclusively on animal food, or from the natives of torrid regions, whose diet consists almost exclusively of the cocoa-nut, the plaintain, the banana, the sago, the yam, the cassava, the maize, and the millet; nor from the *ichthyophagi*, or fish eaters of antiquity; the *kylophagi*, that fed on the young shoots of certain trees; the *elephantophagi*, who lived upon the elephant; or the *struthiophagi*, whose diet

consisted of the flesh of the ostrich, that goes to demonstrate the source from which a diet the most congenial to the moral, mental, and physical developments of man should be obtained. Surrounded as these different races and tribes have been, by a number of circumstances adequate to produce the intellectual and physical modifications by which they are distinguished, it becomes a question of no small importance, to know what that is to which their peculiarities should be attributed. The climate, the want of mental and moral culture, no less than their food, have evidently been instrumental in the production of some of the most distinguishing characteristics observed in the inhabitants residing in either of the climatic extremes. Who would say, that the small stature of the Samoiedes, their flat, round, broad face; thick lips; wide nose; little head; and black hair; 'together with their ignorance and superstition, are not as referable, to the frozen deserts they inhabit, which extends along the ocean forming the northern boundary of European and Asiatic Russia, as to the train-oil, and flesh of the rein-deer, upon which they almost exclusively subsist? Modification, physical or intellectual, therefore, under such circumstances, we can see no propriety in attributing exclusively to food. Most likely they are the result of a combination of causes all operating together. Indeed the animal food instead of being the cause of the diminished stature, &c., of the Esquimaux, is most probably made necessary by the nature of his climate. He needs the train-oil and other articles rich in carbon and hydrogen to furnish the materials of respiration, in order to maintain the heat of the body against the intense cold with which it is surrounded; hence the food of those in the extreme north may be regarded rather as a necessary consequence of their geographical or climatic position, than as a cause of the imperfections, moral or physical, that characterize them. The same might be affirmed concerning the food of the inhabitants of Borneo and Southern Hindostan. Leibig tells us that these people live on a diet containing only from 12 to 20 per cent. of carbon, and that this is made necessary and proper by the circumstances with

which they are surrounded. Situated in an atmosphere highly rarified, and consequently more or less deficient in oxygen, and possessing a temperature but little higher than the air in which they live, they could not, it is supposed, enjoy health in any other way, than by living on the fruits in which their country abounds. The bacon and train-oil of the Laplander would be as little requisite to their comfort and health as would be his warm clothing.

The design of some things we sometimes ascertain by their construction. Cuvier was enabled to discriminate between carnivorous and herbivorous animals merely by an examination of their bones. The principle upon which his discrimination was founded, is that *each animal constitutes a whole, one systematic cycle; and that each part is exactly and invariably adapted to another, and is indicated by it.* By observing the integrity of this principle, he was enabled to classify fossil bones, arrange skeletons of individuals, species, and genera long since extinct. After being arranged, it was easy for C. to ascertain the class to which any given individual belonged; the habits, and kind of food upon which it was designed that it should subsist. Constituted with organs of motion for pursuing and overtaking prey, jaws articulated with great strength for carrying it off, teeth for tearing and dividing, claws for seizing, the animal was regarded as being carnivorous, designed by nature to live on flesh and blood. "In a word," says Cuvier, "the formation of the tooth indicates the structure of the jaw, and its kind of articulation; the structure of the shoulder bone, shows the form of the feet, just as the equation of a curve involves all its properties; and as by assuming each property separately as the base of a particular equation, we should reproduce both the ordinary equation and all its properties; so the nails and shoulder blade indicate the articulation of the jaw; the thigh bone and the other bones taken separately give the form of the tooth, or are given by it in their turn." Principles of a similar character have been applied to man in order to ascertain from his physical construction the kind of food most suitable to his nature. They show

to the satisfaction of anatomists generally that he neither belongs to the one nor to the other, to the strictly herbivorous, or to the carnivorous; but that his organization designates him as occupying a rank that is intermediate. Twenty of his teeth, although comparatively small and but little adapted to grinding, resemble those of the herbivorous, while twelve bear conformations approaching those of the carnivorous animal. In the structure of his alimentary canal the same view seems to be confirmed. He neither possesses the complicated apparatus of the herbivora, the four stomachs of the ruminantia, (*osmasum*, *abomasum*, *ventriculus*, *reticulum*), nor the simple diminished tube of the carnivora. The articulation of the lower jaw with the glenoid cavity, as well as the muscles of mastication, are so strongly marked in the two great classes of animals that it is very obvious man belongs properly to neither. He possesses not in common with the carnivora, the deep glenoid cavity with the condyle or head of the jaw bone so firmly fixed in it as to make luxation impossible without great violence; nor the shallow, loose articulation, permitting the bone to be moved extensively in all directions, such as obtains with the herbivora. Natural facts of this character, when confirmed by others derived from other sources, are certainly entitled to some consequence in fixing the relations of man to the physical universe with which he is surrounded. Entitled to the station of even a minor grade of evidence, they favor the idea, if any thing can be learned from physical organization, that he is an *omnivorous* animal, designed to derive the articles inservient to his nourishment from either of the kingdoms; and that a mixed diet consisting of articles derived from both animal and vegetable matter would come nearer meeting the indications held out by nature than any other. Additional light has recently been thrown around this subject by the labor of organic chemists. A caption perhaps as good as any other in order to offer a few thoughts on this interesting and growing branch of science is,

The Nutrient Elements of different articles of Diet.—To organic chemistry many have looked with much confidence in

the hope that something might be learned concerning the elements of nutrition that would at once settle the diversified views that have attached to the subject. For some time anterior to the labors of the organic chemists, it was suspected that the nutrient properties of all articles of diet, whether obtained from the animal or vegetable kingdom, consisted of a particular principle of a constant character. Haller, we know, supposed this to be jelly; Cullen thought it was an oily or saccharine matter; Stahl, Fordyce, Becker, and others imagined it to be a mucilage; Dumas, mucus; and Hallé regarded it as a hydro-carbonous oxide. Again, it was supposed that the organism performed the office of elaborating the peculiar principle destined for nourishment; that a change was wrought upon articles of diet by the gastric juice, under the influence of the vital force, before they could take any part in the nutritive function. The aspect of some of these views has undergone, of late, a change.

The gastric juice is now regarded as a substance in a state of metamorphosis, by the presence of which the food is merely dissolved. But the nutrient principles of the food, the organic elements subservient to nutrition are, as the ancients supposed, always the same—of a constant character, consisting of oxygen, hydrogen, carbon, and azote, arranged together in compounds denominated, in chemical nomenclature, *isomeric*, from the fact, that, although possessed of different physical properties, they have the same chemical elements united in the same proportions.

These nutritive principles, *albumen*, *fibrin*, and *casein*, as before remarked, are the same in chemical composition; and there is very good reason for supposing them to be one and the same substance. Denis succeeded in converting fibrin into albumen; that is, in giving to it the solubility and coagulability by heat which characterize the white of egg; and Mulder succeeded in showing that all three of the elements are nothing more than modifications of a certain body to which he gave the name of protein. This author found that "when animal albumen, fibrin, and casein are

dissolved in a moderately strong solution of potash, and the solution is exposed for some time to a high temperature, these substances are decomposed. The addition of acetic acid to the solution causes in all three the separation of a translucent, gelatinous precipitate, which has exactly the same characters and composition from whichever of the three substances above mentioned it has been obtained." (Liebig's Animal Chem.)

What is very striking in regard to these proximate principles is, that they possess the same composition and the same characters whether derived from the animal or the vegetable kingdom. The following tables, which may be found in Leibig, confirm this position:

ANIMAL PROXIMATE PRINCIPLES, ACCORDING TO MULDER.

	Albumen.	Fibrin.	Casein.
Carbon,	54.84	54.56	54.96
Hydrogen,	7.09	6.00	7.15
Nitrogen,	15.83	15.72	15.80
Oxygen,	21.23	22.13	21.70
Sulphur,	0.68	0.33	0.36
Phosphorus,	0.33	0.36	
	100.00	100.00	100.00

VEGETABLE PROXIMATE PRINCIPLES, ACCORDING TO JONES AND SHERER.

	Albumen.	Fibrin.	Casein.
Carbon,	55·01	54.603	34.138
Hydrogen,	7.23	7.302	7.156
Nitrogen,	15.92	15.809	15.672
Oxygen, Sulphur, Phosphorus,	21.84	22.286	23.830
	100.00	100.000	100.000

Other organic elements there are, which according to chemical and physiological researches, do not take a conspicuous part in the process of nutrition; and hence are regarded rather as elements of respiration. Among these it is the present fashion to include fats, starch, gum, the different kinds of sugar, pectine, bassorine, &c. The first great class of principles properly, perhaps, styled the elements of nutrition,

contain, as we have seen, azote; and on this account are called the *nitrogenized elements of food.* Those mostly concerned in sustaining respiration are called the *non-nitrogenized elements* or *elements of respiration.*

The speculations concerning the elements of nutrition may now be supplanted by the researches of a branch of science which proposes nothing else for consideration than demonstration,—demonstration by both analysis and synthesis.—These investigations show that the nourishing principles, albumen, fibrin, and casein, whether derived from the animal or vegetable kingdom are identical; exist already formed in vegetables and in the flesh and milk of animals; that, instead of being elaborated by some mysterious process from the articles taken into the stomach, they owe their existence to an agency altogether different. Animal albumen, fibrin, and casein, therefore, differing in no respect from the proximate principles of the same name derived from vegetable substances, it is obvious that it can make no difference from which class of substances food is obtained. That derived from animal possesses every thing in common with that from vegetable substances, and both agree in composition with these elements as found in the blood; that is, the albumen and fibrin of the blood are the same, as the albumen and fibrin found in animal or vegetable food.

The proportion of Nutritious Matter in different Substances.—Diversity obtains, doubtless, in the two great kingdoms of nature in regard to the manner in which the nutritious matters are found combined with adventitious substances that take no share in the nutritive process. Vegetable proximate principles, as a general rule, are found combined with a greater proportion of the elements of respiration, and also with a greater per cent. of redundant matter, answering, perhaps, no other purpose than that of keeping the bowels distended. This, although an important, and probably indispensable circumstance in the nutrition of animals strictly herbivorous, cannot be regarded as of any great moment in the nutrition of man. All experience teaches that graminivorous animals cannot

live and thrive without *fodder*—something mixed with the food that operates mechanically in keeping the bowels and chyliferous ducts from becoming collapsed. Concerning man, whose digestive apparatus is differently constructed, this, in the present state of physiological science, cannot be so positively affirmed. He lives and thrives well on a diet containing a much less quantity of matter taking no share in the nutritive process.

Some of the results lately arrived at by *Boussingault* concerning the relative proportions of the nutrient principle found in substances usually consumed as food, are interesting. A principle well established in physiological science, and to which nothing is known to be opposed, is that increase of mass in the body, the development of its organs, and the supply of waste, are dependent upon the existence in the food of substances capable of being converted into blood; such, for example, as albumen, fibrin, and casein; the organic bodies from which fat is formed, and certain salts, particularly phosphate of lime, magnesia, and iron. From the indispensable necessity of such facts, as well as from a great number of experiments upon inferior animals, Boussingault lays it down as a general rule, concerning the proportions of nutritive matter found in different articles used as food, "*that the nutritious principles of plants and their products reside in their azotized principles; and consequently that their nutritious powers are in proportion to the quantity of azote they contain.*" Here is a table in which he contrasts the articles usually used as the food of man in reference to the azote they contain; and in explanation, says: "I have composed the following table or list of equivalents on this basis, (the proportion of azote contained) having assumed wheaten flour as the standard, and called it 100. As all herbs, roots, and leaves may be pulverized after dying, I have spoken of these articles dry under the name of meal."

Wheaten flour,	100	White-heart cabbage,	810
Wheat,	107	Cabbage meal,	83
Barley meal,	119	Potatoes,	613
Barley,	130	Potatoe meal,	126
Rye,	111	Carrots,	757
Buckwheat,	108	Carrot meal,	95
Maize,	138	Turnips,	1335
Yellow peas,	67	Mealy bananas, (Ticus Indica)	700
Horse beans,	44	Manchat, (Casava plant)	700
White French beans,	56	Name? (Discorea sativa)	300
Rice,	171	Assio, (Anacacha)	1050
Lentils,	57		

From the data afforded by this table or list of equivalents, it appears that leguminous vegetables are possessed of a higher nutritive value than wheaten flour; tubers, including potatoes, carrots, turnips, and the seeds of the cereal grasses, are but moderately nutritious; rice, generally regarded as occupying a very conspicuous place in the list of highly nutritious substances, is partially deficient.

We are all aware, that countries are frequently quoted where vegetable articles, such as rice and the potato, constitute the sole articles of food with the inhabitants. From long experience in such countries, having lived among the inhabitants, Boussingault affirms such not to be the case. "In Alsace, for example," he says, "the peasantry always associate their potato diet with a large quantity of sour curdled milk. The same is true of the inhabitants of Ireland, who use large quantities of butter-milk or salt herring. The inhabitants of the Upper Andes, instead of living exclusively on potatoes, as travellers have asserted, use as their most common food '*lorco*,' a compound of potatoes and cheese. Rice, upon which it has been said the population of India almost exclusively subsist, appears always to undergo an admixture with other substances." Mr. Lequerri, after a long residence in India, says, "the food is almost entirely vegetable, and rice is the staple; the inferior castes only, ever eat meat. But all eat '*kari*,' an article prepared with meat, fish, or vegetables, which is mixed with the rice boiled in very little water. It is requisite to have seen the Indians at their meals to have any idea of the enormous quantity of rice they will put into their stomachs at a single meal. No European could cram so much

at a time; and they very commonly allow that rice will not nourish them." (Boussingault on Rural Economy, and its relations to Chemistry, Physics, and Meteorology.)

Estimating the proportions of nutritious matter of different kinds of food by their chemical composition, and by experiments upon man and inferior animals, we shall fail in coming to any other conclusions than that *flesh*, of all the articles used as aliments, contains the least redundant matter, and is the richest in the materials necessary to sustain life and health. Playfair and Boeckman give for flesh, (fibrin, albumen, cellular-tissue and nerves) and for blood, one and the same formula, namely: carbon 48, nitrogen 6, hydrogen 39, oxygen 15. (Liebig's Animal Chem.) Liebig himself, says that 15 lbs. of flesh contain not more carbon than 4 lbs. of starch. When this matter is tested by experience it is found to be strengthened. Indirectly, the experiments of Magendie show, that animals, although incapable of living exclusively for any length of time on any one article, may, nevertheless, be supported for the greatest length of time on those organic principles having a composition identical with flesh. Liebig also tells us that the process of metamorphosis, and of nutrition, and reproduction goes on more slowly in graminivorous than carnivorous animals; and that the cause of this depends upon the fact that 4-5th lbs. of the food of the former are destitute of those nitrogenized compounds (fibrin and albumen) which go to make blood. A pig, according to him, fed with highly nitrogenized food, becomes full of flesh; fed with potatoes (starch) it acquires little *flesh*, but a thick layer of *fat*.

From these facts it is very probable that flesh, approaching as it does to the formula of blood, contains the greatest relative proportion of nutritive matter; and that, other things being equal, man can subsist on less quantities by weight of this article than any other known among the list of aliments. By no means do we intend to say that he can live in the enjoyment of health on flesh alone; or that this would be his proper food. But from the facts to which we have alluded, we

regard the position as reasonable that it contains the greatest relative amount of nourishment.

While upon this part of our subject, it should not be forgotten, that some bodies highly nitrogenized, with others containing no nitrogen, although predominant in many articles used as aliments, fail when exclusively relied upon to sustain life, or even to maintain the system in a state of health. With the experiments of Magendie, Bostock, and Liebig, physiologists are familiar. By the first of these authors, it has long since been demonstrated, that sugar, olive oil, gum arabic, butter, pure wheaten bread, or rice, fail, when administered separately for any length of time to a dog, to sustain life. Phenomena, such as ulceration of the cornea, disappearance of fat, reduction of the size of the muscles, contraction of the stomach and intestines, an alkaline instead of an acid condition of the urine, too great a proportion of bilin or picromel in the bile, were observed to be the result, followed ultimately by death. Liebig also affirms that animals fed exclusively on gelatin, the most highly nitrogenized element of the food of the carnivora, died with the symptoms of starvation.

For this want of the nutritive power or principle, in the substances to which we have alluded, reasons are not easily assigned. Some of the animals, upon which experiments were made, were examined in order to see if the articles had undergone digestion. Magendie satisfied himself in relation to this point. He found that each of the substances had been converted into chyme, and that they afforded an abundant supply of chyle. Failing to find any thing in digestion adequate to an explanation of the subject, M. came to the conclusion, that *variety of diet* is an indispensable circumstance in this branch of hygiene—that the phenomena consequent upon his experiments were due equally as much to the simplicity of the food, as to any thing in relation to its properties. Stark, who sacrificed his life in making experiments of a similar character, came to the same conclusions. Upon this point, however, the labors of the organic chemist are useful. Mulder and Liebig have made the position very plausible, that the

non-nitrogenized substances, such as sugar, starch, gum, the different kinds of *fat*, &c., are, properly speaking, the elements of *respiration*, rather than of *nutrition;* and that gelatin, although highly nitrogenized, is destitute of the proper arrangement in the proportion of its elements to form blood. It contains no sulphur or phosphorus, and less carbon, or more nitrogen than the organic elements from which blood is formed.

The fact should not be overlooked, in this place, that a source of fallacy, growing out of the habits of the animals experimented upon might have affected in a very material manner the results of Magendie's experiments. It could not be expected, for example, that a dog would thrive well on sugar, or that an ass could live on rice, or that man, accustomed to variety, could do well, for any length of time, on any single article. Personal observation is sufficient to convince any one, accustomed to the varieties of diet common to our climate, that it is impossible, without a sacrifice of health, to live for any length of time upon any one article that might be selected from the list of alimentary substances. Those acquainted with rural economy have always been familiar with the salutary results of variety in the feeding of domestic animals, and also with the deleterious consequences which result from a restricted system of regimen. At a manufacturing established in this State, for slaughtering sheep, the blood and inferior parts of the flesh were fed to hogs. It was found, as I have learned, that these animals, on such food, did not do well; were not easily fattened. Accordingly, meal was afterwards mixed with the food, and the result of this measure proved highly favorable. Now, without doubt, the effects of this experiment would have been different, had the animals been only accustomed to the digestion of animal food. Nevertheless, it would be very interesting to know which of the tissues, in the experiment, underwent the most alteration. The muscular, from its similarity to the food consumed, it might be supposed, suffered the least. Next in point of exemption from any great change were, most likely, those tissues composed

principally of gelatin. Diminished condition of the nervous, pulpy, or medullary tissues composed principally of albumen united to a fatty matter, together with the deposition of fat, were probably the most conspicuous phenomena attending the experiment.

From this brief reference to facts, the accuracy of which cannot be called in question, without setting aside the only mode we have of testing the composition of organic bodies, it is very evident, that the greatest proportion of nutritious matter is found in animal substances, and other things being equal, animals of the inferior classes, not less than man, require, to enjoy health, variety of diet, and frequent changes from one article to another.

Exclusive Vegetable-eating.—Deference might make it proper in this place to advert, briefly, to the opinions of some persons concerning the propriety of exclusive vegetable eating. Frequently it is asserted that the nourishment of vegetables is better calculated to promote long life, a vigorous and healthy condition of all the functions, intellectual, moral, and physical, than that derived from animal matter. By such persons it is also asserted, that animal aliment was originally the main cause of human degeneracy; that it is discountenanced by the Bible; that it is calculated to make the individuals who use it vicious, intemperate, and blood-thirsty; that it gives rise to a great number of diseases, to which mankind would not otherwise be subject. Eulogies really the most passionate have been bestowed upon vegetable-eating, while reasonings the most elaborate have been directed against a mixed diet; and that too, not less by persons holding conspicuous stations in the commonwealth of letters, than by medical men, many of whom in their day were deeply versed in the literature of their profession.

Dr. Wm. Alcott's work is now before us with the following imposing title: "*Vegetable Diet as sanctioned by Medical men, in all ages.*" I find in this work such names as Rush, Cullen, Gregory, Lawrence, Cuvier, Home, Cheyne, Abernethy,

and Muzzy, quoted in favor of man deriving his food exclusively from vegetables. In justice, however, to many of these distinguished authors it should be remarked, that they delivered themselves on this exclusive system with very considerable ambiguity. This is not true, I confess, of our friend Professor Muzzy, formerly of Hanover, New Hampshire, now of Cincinnati, Ohio. From the terms of his expressions he stands committed for a number of reasons, founded not less on moral than on physical considerations. Take, however, as a sample of ambiguity, the quotation from the eccentric Abernethy to show that *he* is in favor of the system:

"If you put improper food in the stomach it becomes disordered, and the whole system is affected. Vegetable matter ferments and becomes gaseous; while animal substances are changed into a putrid, abominable, and acid stimulus. Now, some people acquire preposterous noses; others, blotches on the face, and different parts of the body; others inflammation of the eyes, all arising from irritations of the stomach. I am often asked why I don't practice what I preach. I reply by reminding the inquirer of the parson and the sign-post—both point the way, but neither follows its course."

In relation to the various opinions which have obtained currency upon vegetable-eating, it may be submitted, that at the time that most of them were rife, the only certain method of testing the nutritive qualities of alimentary substances was in its infancy. Analysis of the animal and vegetable articles, commonly used as food, had not taken place. Until within the present century nobody had any evidence to believe that the nourishing principles were of a constant character;* always the same, whether derived from animal or vegetable

* We are aware, that, by some recent experiments, said to have been conducted with great care, Dumas and Cahoun are supposed to have succeeded in showing that the proportion of carbon is 7 per cent. less in fibrin than in albumen, while that of azote is from 8 to 9 per cent. more. These experiments will remove albumen and fibrin from the class of *isomeric* bodies. They do not, however, affect the question of the identity of animal albumen, fibrin, and casein with vegetable albumen, fibrin, and casein.

matter; and identical in chemical composition with the blood. Attested, nevertheless, as such facts have been by chemical analysis, they must have their influence in making up an opinion concerning the proper food of man. Experiments upon inferior animals strengthen their correctness. So, also, does a proper understanding of the process of chymification. Food when submitted to the action of the gastric juice is dissolved, but we are told that its elements, albumen, fibrin, and casein, are not changed in chemical composition. In his work on Animal Chemistry, Liebig tells us: "The clear gastric juice contains a substance in a state of transformation, by the contact of which with those constituents of the food, which by themselves are insoluble in water, the latter acquire in virtue of a new grouping of their atoms the property of dissolving in that fluid. During digestion the gastric juice when separated is found to contain a free mineral acid, the presence of which checks all further change. That the food is rendered soluble quite independent of the *vitality* of the digestive organs, has been proved by a number of the most beautiful experiments. Food, enclosed in perforated metallic tubes, so that it could not come in contact with the stomach was found to disappear as rapidly, and to be as perfectly digested, as if the covering had been absent; and fresh gastric juice, out of the body, when boiled white of egg, or muscular fibre was kept in contact with it for a time, at the temperature of the body, caused these substances to lose the solid form and to dissolve in the liquid." By this it appears that in chymification the elements of the food undergo no change except that of being dissolved, and made to assume a form ready for assimilation.

If then the constituents of the food derived from animal or vegetable matter be the same, and are not altered by chymification, but pass immediately into the blood unchanged, it is reasonable to suppose that considerations founded on something else than nutrition must operate on an individual who prefers vegetable to animal food.

Concerning the supposition that animal food makes those

who use it vicious and sanguine in disposition, I have only to say, that such speculations seem more likely to have had their origin in the imagination, than in reason, or a careful and an extensive observance of the influence of food on the habits and dispositions of animals. Like causes under like circumstances, must give rise to something like the same effects. How, then, is it possible for animal, which as we have seen differs in no respect from vegetable food, to give rise to consequences which the latter is entirely incapable of producing.

Into a consideration of the *morality* of eating animal food we shall not enter. This question belongs to the department of Theology, and by the Divine Code only can it be settled. We shall now proceed to a slight consideration of a few points in relation to

The Circumstances requiring a modification of Diet.—

Only is it intended here to point out some of the circumstances that, *in health*, require a variation of diet. Hacknied as this part of our subject has been, in times past, it is still, perhaps, fertile enough to furnish employment for additional thought and experiment.

Among the circumstances to which we allude is the *season of the year* in which the diet is used. It is undoubtedly true that alimentary substances which might be proper at one season of the year may at another prove more or less injurious. Of course persons would do better on a diet calculated to promote calorification in winter, than in summer. In his theory of calorification, Liebig takes the very plausible position that the hydrogen and carbon of the food exercise an agency in the production of animal heat. It matters not, he informs us, what intermediate changes the food may undergo in the organism, the last change is the conversion of its carbon into carbonic acid, and its hydrogen into water. The oxygen for these chemical processes is taken in chiefly through the lungs; and the author to whom we have alluded, contends, that, inasmuch as oxygen cannot combine with either hydrogen or carbon *outside* of the body without the liberation

of heat, therefore it is rational to suppose that the same processes cannot go on *inside* of the body without being attended with a corresponding result; and also, that the quantity of heat is just the same as if the carbon and hydrogen had been burned in the open air. If such positions be correct; if they are to be regarded as the literature of calorification at the present time, then all must agree that food rich in carbon and hydrogen suits better for winter than for summer. The habits of nations on different parts of the globe are referred to by Liebig in order to strengthen the positions advanced.

In the South we are told the natives prefer to feed on the fruits which in the fresh state contain not more than 12 per cent. of carbon; while those in the Arctic regions live principally on bacon and train-oil containing from 60 to 80 per cent. of carbon. In temperate climates, it is thought, we need about one-eighth more carbon in winter than in summer.

Recently we have had some additional testimony on this subject. In a paper by John Robertson, of Manchester, England, "*On the period of Puberty in Esquimaux Women*," a letter is published from the Rev. J. Lundberg, Superintendent of the Moravian Missions, in which we have the following facts: "We observe with regret that the now more frequent use of European provisions, as bread, flour, peas, &c., (instead of fish and flesh) acts injuriously on the bodily constitution of the Esquimaux. They become weaker and are attacked with some diseases which were formerly unknown in Labrador."

Bearing indirectly on this matter is the fact, that animals eliminate more carbonic acid by the function of respiration at a low, than at a high temperature; more, therefore, in winter, than in summer. F. M. Letellier, lately in a memoir to the French *Academie des Sciences*, related some experiments proving that the amount of carbonic acid expired at 32° Fahr. was about twice as much as at the temperature of 86°. For the production of this relative excess of carbonic acid, the food certainly must contain an excess of carbon; because it is axiomatic that the excretions during health can contain nothing not previously taken into the system, either as food or

as the materials of respiration. If, then, there be a connexion between the constituents of the food and the production of animal heat, it is obvious that modifications of the former are indispensable to a physiological regulation of the latter. Now, whether we adopt the theory of *Lavoisier*, *Seguin*, and *Liebig*, that the heat of the system is derived from the combination of the oxygen inspired, with the carbon and hydrogen of the metamorphosed tissues which proceed ultimately from the food; or that of *Black*, that it is the result of the latent heat of the inspired air becoming sensible in the lungs; or that of *Brodie*, that it is derived from the great nervous centres; or that of *Chosat*, who thinks that the trisplanchnic nerve is the great organ for its development; or that of *Home*, that it depends on the ganglionic part of the nervous system; or that of *Phillip*, who regards it as a secretion; or that of those who look upon it as the joint production of the three great functions of life, innervation, circulation, and secretion,—certain it is, that the theory of combustion as defended and explained by Liebig, is the most philosophical of any that has yet been proposed. Resisted, indeed, the positions cannot be that a union of oxygen with hydrogen and carbon, giving rise to water and carbonic acid, takes place some how or other in the system; and that these combinations cannot take place without the liberation of constant quantities of heat, as much as if burned in the open air, or oxygen gas. The circumstances then being present, it is rational to conclude, that, although under the controling influence of the vital force, this force is only exerted in placing the elements in a proper condition for that play of the affinities by which the phenomena of heat are produced.

It has for some time been known, that the relative proportion of oxygen in the atmosphere is greater in winter than in summer; and consequently that the amount inspired is greater at the former than at the latter period. This excess of oxygen corresponds with the excess of carbonic acid evolved during cold weather, as shown by the experiments of Letellier. Now, if there is taken into the system in a low temperature

of the atmosphere a relative excess of oxygen; and if there is a relative excess of carbonic acid during the same period expired, how can we resist the conclusion that the food must contain carbon in quantities sufficient for the conversion of the excess of oxygen into carbonic acid? Does not also the production of this excess of carbonic acid enable us to understand how it is that the inhabitants of the polar regions are enabled to resist a temperature from 70° to 90° lower than that of their bodies?

Taken then as sustained, that the diet should correspond with the temperature of the atmosphere in the different seasons of the year, it might now be inquired what kind of diet is best calculated to promote health. Imperfectly, we are aware, in the present state of our knowledge, can this question be answered. There can be but little doubt, that the practices, which have obtained among the inhabitants of the climatic extremes and temperate latitudes, are in the general correct; such as are demanded by the peculiar conditions of the atmosphere in which they reside. Those inhabiting the arctic regions will enjoy the best health by using food rich in hydrogen and carbon, such as the oleaginous substances. In the South, of course, the diet just mentioned would be contra-indicated. Fruits and such articles as are deficient in the elements of calorification, with them would be best calculated to promote health. We of a temperate climate, it might reasonably be presumed, should make use of a diet approaching in winter that used by the inhabitants of the North; while in summer it should correspond more nearly to that used by the inhabitants of the South. This is exactly the practice, which so far as we are acquainted in our climate has pretty universally obtained. We consume mostly during winter the oleaginous parts of animal food, such as bacon, fat meats of all kinds, and butter; while in summer the diet consists more of the vegeto-gelatinous, the saccharine and the farinaceous; the former class rich in carbon, the latter partially deficient.

Of the influence of *age* in requiring modifications of diet,

every one, the least conversant with dietetics is familiar. From the first hour of infancy until adult age, and from this until the last periods of decline, the system is undergoing continual mutations; and the requirements of each period must obviously correspond with the different conditions of the system.

In childhood where respiration is very frequent (35), the circulation quick (120), and the temperature high (102°,) nature has made a provision in the form of milk, which is a natural product perfectly fitted to sustain life. Analytically considered, this substance is found to contain all the constituents requisite for the development and growth of the young system. The casein of which it is in part composed, is a nitrogenized constituent, distinguished from fibrin and albumen by its great solubility, and by not coagulating when heated. It is identical in composition with the blood, containing, however, a much larger proportion of the earth of bones, and that in a form so soluble, as to be capable of reaching every part of the body. Milk also contains sugar and butter, substances having no nitrogen in their composition, but large proportions of carbon and hydrogen. Regarded as a compound, there appears to be, in the composition of milk, an obvious adaptation of means to ends. For the development and continual growth of the bones, muscles, &c., the casein is provided; and, to answer the wants of the exalted temperature and the frequency of the respirations, materials abounding in carbon and hydrogen are found in the butter and sugar.

Very *old persons* have a condition of the system that differs widely from that incident to childhood. With them waste and supply are not in a state of equilibrium. The former, in a normal condition of the system predominates. Ordinarily in *confirmed old age* or *caducity*, there is noticed among other changes incident to this period, an atrophied state of the thorax and lungs, which necessarily diminishes the amount of oxygen inspired; predispositions of the voluntary and involuntary muscles to paralysis, from want of ner-

vous influence; ossification of the valves of the heart and arteries; torpidity of the chylopoitic apparatus; and an inefficient condition of the function of calorification. A diet suitable to these various states of the organism, must differ widely from that proper to a child, or to an individual in the period of adolescence. The casein of milk contains too great a proportion of the earth of bones. Such constituents are not needed, as the osseous system is already developed. Butter contains hydrogen and carbon in proportions too great to be supplied with their equivalents of oxygen. Diminished so much in capacity, the lungs, it would be reasonable to suppose, would fail in furnishing the requisite quantities of oxygen for the oxidation of these elements. To most observers it is also known that, not only butter, but fats of all kinds, are digested with difficulty. Such being the case they are, in consequence of the weakness of the digestive organs of an old person, contra indicated. To keep the system in a physiological condition the food, it might be presumed, should consist, in order to supply waste, of articles containing a reasonable proportion of nutritious matter, and also of a sufficiency of elements calculated to maintain the function of calorification. For these purposes the most digestible kinds of flesh, farinaceous, and the vegeto-gelatinous substances, all things considered, would, perhaps, answer as well as any other to fulfil the indications presented. Leguminous plants, it should be recollected, are of all vegetable substances the richest in nutritive principles, and from such a consideration would likely be better adapted to the condition of the system we have been considering than flesh of any kind. Old persons while in the enjoyment of apparent health are found to suffer more than any other class from the effects of a low temperature of the atmosphere. My own observations in relation to them are, that the most of them die during winter; and often too, without any other visible cause than coldness of the weather. Many indeed, go to bed at night seemingly well, but in the morning are found dead. Unqestionably the cause of all this will find its best explanation in the imper-

fect condition of the function of calorification; and as a consequence the food, no less than other things, may reasonably be invoked in trying to avert such a catastrophe.

Between the two extremes we have the period of *virility* or manhood, in which the system differs from that of an old person in the fact that there is no preponderance of the various functions in favor of *waste;* and from the child in that there is none in favor of increase of mass. Waste and supply are exactly balanced; and notwithstanding the immense amount of substances taken into the system during a year (there is of oxygen alone 746 lbs., according to Lavoisier, and of carbon 5,073 ounces,) by the assimilative and respiratory functions, the body at the end of that time is found, as regards its weight, not to be increased. With such an individual we should not expect a diet to agree unless it comported with the peculiar condition of the system. To increase the mass and build up the osseous system, as in the case of a child, a peculiarity of substances alimentary would not be needed. Nor would the diet require to be shaped in accordance with the waste and lack of energy found in the principal functions of life in an old person. Food calculated to keep waste and supply balanced, and to afford the necessary materials of respiration would seem to be what is indicated. Best adapted to the accomplishment of these ends, are, as we have elsewhere shown, those nitrogenized substances abounding in albumen and fibrin, and also the non-nitrogenized substances. We have seen that the former are contained in greatest proportions in flesh, the leguminous plants, lentils, and wheaten flour; the latter in the various fats, oleaginous substances generally, potatoes, maize, &c. As there are, however, a number of circumstances which require that the food should be varied, and without due respect to which all the blessings of diet may be frustrated, we shall now advert to some of these, but only to give them a very partial consideration.

Prominently among these are *occupation* and *habit.*

The man engaged, from 12 to 16 hours every day, in physical efforts, may use a diet with impunity, nay with advan-

tage, that would cause disease in a person engaged in intellectual pursuits, connected with confinement and sedentary habits. Strikingly is this fact exemplified in every day's experience. The man at hard labor during the day is able to consume at night large portions of flesh, fat, vegetables, &c.; while another one, sitting at the writing table all day, makes a very good meal on two or three biscuits and a cup of tea. Both enjoy good health, but it is only in consequence of employing such alimentary substances as are suitable to their occupations. The physician actively engaged in the arduous duties of his profession knows that he can then digest articles in quantities and of qualities, that under other circumstances would operate upon him as a source of great annoyance. Satisfactory reasons for this are easily assigned. An individual at labor respires more frequently than when at rest; the circulation is carried on with greater rapidity; the gastric juice is secreted more copiously, and indeed, increased activity applies, not less to all the secretory organs, than it does to those the office of which is to excrete. By the frequency of respiration the amount of oxygen introduced into the system is greatly augmented, and as a consequence the constituents of the venous blood arising from the metamorphosis of the tissues are rapidly oxidated. The augmented condition of the circulation quickly displaces the effete parts of organs and tissues; and hence there is created in the system, in order to supply their place, an absolute demand for substances in quantities sufficient for the purposes of assimilation. An increased supply of gastric juice corresponding with the other conditions present in the system of a laboring man is an indispensable circumstance, and favors the digestion and assimilation of his food. At rest, with no food in the stomach, the gastric juice is secreted in small quantities. The reverse of this takes place when the stomach is full and there is exercise. Here then are present all the circumstances necessary to the digestion of the largest quantities of food.

With a person engaged in intellectual pursuits a different state of things obtains. The severe student or author knows

that after indulging in a full meal of stimulating animal or vegetable food, his mind is rendered dull, stupid, and inactive; and is incompetent to the performance of its ordinary labor. A singular indescribable sensation of uneasiness, attended with indisposition to bodily or mental exertion pervades the entire system; and, as a matter of course, he is compelled to remain idle during the hours of digestion. The cause of this trouble has generally been sought for in the supposition that it is all occasioned by the presence of the food withdrawing the nervous and vascular influence from the brain and colonizing them for a time in the stomach. Good as this reason appears to be, it may be made better by connecting it with the fact, that the functions of secretion and excretion, of circulation and respiration in the intellectual man, if not impaired, are usually below the standard of health. Generally, intellectual men are observed to have pale faces, weak circulation, little muscular strength, and an enfeebled condition of the digestive organs. Taken all together, therefore, these things do much towards showing the propriety of such variations in the food as will comport with the peculiarities of the organism. Incidentally it might here be remarked, that the making of a proper selection of alimentary substances, by men engaged in intellectual pursuits, is of the utmost possible importance. Without a strict attention to his diet no man can make progress in intellectual labor. The right exercise of the mind is to a certain extent dependent upon the stomach. When the stomach contains substances in quantities, or of qualities that it cannot readily digest, a suspension of all the energies of the mind is the consequence. This, however, is not all; the stomach, even after the load from it is removed, is for some time afterwards in a disordered condition. The repetition of such errors soon leads to disease, by which the individual is often converted into a confirmed invalid. By no means do we wish to be understood that men who labor with their minds should not eat; nor would we even say that they should not regard the consumption of the luxuries of our climate as a source of enjoyment,

and thus, if they think proper, make the saying good, that they "*live to eat.*" There is a diet proper for them, as well as for laboring men. But it has its peculiarities, and it is these, we urge, that should be made the subject of the strictest attention during life. As we have partially alluded, in another place, to the diet most proper, and as every individual has his own idiosyncracies that should invariably be consulted, we shall not insist further upon the subject than by adverting to a maxim of former days, which is, that "so far as his food is concerned, man is either his own physician or a fool at the age of forty."

That *habit* has something about it that should be consulted in the selection of a proper diet, seems pretty obvious. According to vulgar expression, it is "*second nature.*" We see this strikingly manifested in individuals who in the early period of life and while the organism is being developed, are accustomed to active exercise or hard labor; but at the period of manhood, or afterwards, adopt habits of a contrary character. Such find that without making a corresponding change in diet, or some regulations in regard to exercise, they are precipitated into disease. I have often noticed this to be the case with young students. Many of them are accustomed in early life to active exercise or labor. More or less of this they usually take during their private pupilage. When, however, they go to attend the teaching of professors, their former habits ar forgotten. Duty requires a large portion of their time in their rooms, or at the college; and the result is disease of the digestive organs, and impairment of the secretions generally of the system. It has been supposed that active exercise in early life exerts a favorable influence in developing and hardening the physical powers. This is very true, but it also creates a demand in the system for the continuance of such habits. In consequence of this, persons accustomed to labor in early life, bear the confinement incident to intellectual pursuits with much more inconvenience, than those who have spent the first periods of life in comparative idleness. Besides students proper, there is another class of

persons among whom the annual mortality in our country from want of proper dietetic regulations is very high. I allude to those who having been raised to habits of active exercise or labor, adopt afterwards, as a means of obtaining a livelihood, some sedentary mechanical pursuit, or perhaps that of standing behind the counter in mercantile establishments. In a short time such find the appetite failing; grow pale from a sluggish condition of the circulation; are afflicted with constipation, sour stomach, gasterrhœa, &c. Instead of regarding these inconveniences as results of a change of habit, which could be easily remedied, recourse is too often had to stimulants, sweet-meats, and trash of various kinds, than which nothing could exercise consequences more injurious. The only way then by which all those who have been accustomed to active exercise can avoid much inconvenience and disease, is by strict regard to regimen, and such other things as will comport with their change of habit and occupation.

[TO BE CONTINUED.]

REVIEWS.

Art. III.—*Elements of Pathological Anatomy;* Illustrated by Colored Engravings and Two Hundred and Fifty Woodcuts. By Samuel D. Gross, M.D., Professor of Surgery in the Medical Institute of Louisville; Late Professor of Pathological Anatomy in the Medical Department of the Cincinnati College; Surgeon to the Louisville Marine Hospital, etc., etc. *Second Edition, thoroughly Revised and greatly Enlarged.* Philadelphia: Ed. Barrington & Geo. D. Haswell. Louisville: James Maxwell, jr. 1845. Super-royal 8vo. pp. 822.

[continued from page 134.]

Resuming our notice of this volume, we come next to Chapter xvii, which treats of *Polypes.* These occur in any part of the mucous system, except the gall-bladder, ureters, and Fallopian tubes. The most common situation is the nose; next to this is the uterus; then comes the maxillary sinus; then the rectum; and, lastly, the vagina. Polypes are likewise found in the inferior animals, especially the horse, ass, cow, and dog; and here they affect the same situations as in the human subject. In regard to their structure, four varieties are observed: the vesicular, gelatinoid or cellular, which is most frequently seen in the nose; the fibrous, most common in the uterus; the vascular, rarer than the two preceding, and found in the rectum, external ear, vagina, and uterus; lastly, the granular, least frequent of any, and found chiefly in the uterus. They are all liable to undergo changes from disease, like other morbid productions; and these changes have been erected into classes by some pathologists. Hence the carcinomatous, lardaceous, fibro-cartilaginous, cartilaginous, osseous, and earthy polypes. The fibrous and granular varieties are liable to malignant degeneration; the others rarely, if ever.

The harder varieties are nearly always solitary; the softer ones frequently multiple, or in clusters. They sometimes coexist in different parts of the body. Polypes are not new formations, but result from hypertrophy of the mucous membrane alone, or conjoined with some of the textures which it overlies. Thus in different polypes, different tissues predominate: in the fibrous, the fibrous textures of the part; in the vesicular, the mucous membrane and the cellular tissue beneath it; in the granular, the mucous follicles.

Polypes are always covered by mucous membrane, which is liable to various alterations. In the interior, cysts are frequently found, containing serous, purulent, or bloody fluids; and even tubercular matter has been seen in nasal polypes. The effects of these tumors on the surrounding parts vary according to their size and situation. In the uterus, even a very small one may give rise to fatal hemorrhages. In the maxillary sinus, they produce immense deformity, by distending that cavity, and encroaching upon the eye, nose, and lachrymal canal. In the larynx, they cause dyspnœa, and alteration or total extinction of voice. Polypes, it need scarcely be said, are endowed with blood-vessels, nerves, and absorbents.

Chapter xviii—Treats of a curious and interesting subject—that of *Hydatids.* Hydatids have the form of a thin vesicle, filled with a clear transparent fluid, and surrounded by a dense fibrous capsule. They infest nearly all classes of animals. In the human subject they are most common in adults and the old, but have been observed in the fœtus. Their existence is brief, occupying at most but a year or two. They have been differently classified by different writers; the author adopts the division of Cloquet, who makes five genera: the *cysticercus*, the *polycephalus*, the *diceras*, the *echinococcus*, and the *acephalocystis.* The first four genera are provided with appendices resembling heads, hooklets, tentacula, or suckers; hence they are sometimes called cephalocysts; they exhibit a very feeble degree of sensibility and motility. The acephalocysts, as the name implies, have no heads, or hooklets, but consist of a simple globular vesicle; they are impas-

sive under stimuli, exhibiting neither motion nor sensibility, their claims to individual life resting upon the power of self-nutrition and of reproduction which they possess in common with the others. Of the cysticercus there are five species: 1. The cellular, found almost exclusively in the hog, in which it constitutes the *measles*, and seen only once or twice in man. 2. The vesicular, observed once in the choroid plexus of an apoplectic subject—common in the ox, sheep, hog, goat, stag, and gazelle. 3. The dicystis, found by Laennec in the lateral ventricles of an apoplectic man. 4. The speckled, observed once by Treutler in the choroid plexus of a young female. 5. The Fischerian, found likewise in the choroid plexus of the human subject, on two occasions, by Fischer, after whom it is named. The polycephalus is rare, and has not yet been found in the human subject; it occurs in the brain, liver, and intermuscular cellular tissue of the inferior animals—when existing in the brain, producing what is called the *staggers.* The diceras is met with in the alimentary canal of the lower animals, and occasionally in that of man. The echinococcus, a genus not admitted by Cuvier, occupies the brain, liver, spleen, and omentum, in the lower animals; in man it has been twice observed in the ventricles of the brain, and once voided in the urine. The most common, as well as the most interesting class, is the acephalocystis. This occurs both in man and the lower animals, and infests particularly the liver, but has been found in every part of the body except the alimentary canal, urinary bladder, and lungs. Cruveilhier divides the acephalocysts into two species, the solitary and the social. The former is most common in the lower animals, and generally exists simultaneously in several organs; the latter is oftenest seen in man, and rarely infests more than a single organ, its favorite seat being the ovary and uterus, from the latter of which immense masses are sometimes expelled. The internal surface of the acephalocyst, and of some other varieties, is often found studded with minute granular bodies, greyish and spherical, which are supposed to be young hydatids; the cyst is then said to be endogenous. Sometimes the granular bodies

are found upon the external surface; the entozoon is then said to be exogenous. The former is most frequent in the human subject, the latter in ruminant animals. Occasionally the development takes place between the different tunics of the cyst. A large acephalocyst is sometimes found to contain several smaller ones, situated one within the other, like so many pill-boxes, and progressively diminishing in size. Occasionally, these secondary cysts, by their rapid development, burst the parent cyst. Hydatids are not in immediate contact with the tissues where they are situated, but are surrounded and isolated by a cyst; and often between their parietes and this enclosing capsule, is interposed a soft, pulpy, dirty-looking substance, regarded by Hodgkin as an excrementitious secretion of the hydatid itself.

Whence come these parasites? and what is their organization? These are interesting questions, but in answer to them we have nothing but conjectures more or less plausible. As it respects their origin, the author adopts the opinion of Vitet, that they result from inflammation—an inflammation of a specific nature, "followed by the deposition of a fibro-albuminous substance, or, what is the same thing, a sort of plastic lymph, the particles of which arrange themselves in such a manner as to create an inferior being, an entozooic parasite." The capsule enclosing this parasite, is not derived, as Hodgkin supposes, from the surrounding cellular tissue, inasmuch as it is frequently found where that tissue is almost absent; but is a new formation, like the hydatid itself, developed at the same time with the latter, and differing from it only in the arrangement of its particles. This enclosing cyst is furnished with vessels, in many instances continuous with those of the adjacent parts, in other cases having no such connection, but evidently of new formation. In no case can these vessels be traced into the parietes of the hydatid. Has the latter any vessels? and whence comes the clear transparent fluid it contains when healthy, or the turbid, discolored, and variously altered fluid when diseased? Secretion does not take place in any animal, however minute, without vessels; and hence,

if the contents of the hydatid are allowed to be of its own production, it must be provided with vessels. Experiments have been made by Carmichael and Owen, from which it appears that endosmose takes place in these animals; but these experiments only show that the fluids in question *may* gain admittance in that mode, not that they always *do* thus gain admittance. A question still remains: whence come the materials for the nourishment of these beings? This is derived from the vessels of the enclosing cyst, being filtered through the soft pulpy substance which lies between it and the hydatid, and then imbibed by the proper cyst of the latter. Such, are some of the author's conjectures—for they are nothing more, and claim to be nothing more. They are by no means satisfactory to us, nor do they seem altogether consistent with each other.

Klencke, of Berlin, has some novel views concerning hydatids. He considers them as a *living contagious principle*, and has published experiments to show their transmissibility. As they exist in very many animals, not only in the flesh, but likewise in the urine, fæces, milk, menstrual fluid, and even in the blood, there is no scarcity of them in the external world, either as ovules, or individuals more or less completely developed; and once admitted into the human intestinal canal they may find their way thence into different tissues, or the ovules, being excessively minute, may enter the circulation and be transported through the system to any organ of the body that affords a proper *nidus* for their reception. The acephalocysts, according to the same writer, are not distinct from the echinococci, being ova of the latter; and the polycephalous hydatid he views as a sort of polypus, each one of the heads representing a distinct individual being. He has seen the parent vesicle with an appearance of contraction or division, which he regards as commencing fission. The polycephalus is also propagated by buds or gems like the acephalocyst; so that the reproduction of hydatids takes place both by fissiparous and gemmiparous generation.

As the acephalocyst neither feels nor moves, Professor

Owen thinks it doubtful whether they can be referred to the animal kingdom as that kingdom is at present characterized. He goes on to say: "It would then be a question how far its chemical composition forbids us to rank the acephalocyst among vegetables. In this kingdom it would obviously take place next those simple and minute vesicles which in the aggregate constitute the green matter of Priestly (*Protococcus viridis*, *Agardh*); or those equally simple but differently colored *psychodiariæ*, which give rise to the red snow of the arctic regions (*protococcus kermesianus.*) These 'first born of Flora' consist, in fact, of a simple transparent cyst, and propagate their kind by gemmules developed from the external surface of their parent."

The successive development of acephalocysts one within the other, bears a striking similarity to the development of the primitive cells of animal and vegetable structure; for the former like the latter, appear to be nucleated cells from the interior of which new cell-germs are evolved. Now it can be conceived that inflammation might act as a cause of disaggregation to the cells of which the tissues are composed; but it remains to understand how the off-sets thus formed become endowed with individuality, or with a separate and distinct life.

Whether we can trace the immediate causes of hydatids, or not, we know some of the circumstances under which they are produced. Sheep kept in wet clayey pastures, and eating juicy unripe vegetables, are subject to them. The author estimates that one-tenth of the hogs annually slaughtered in the shambles of Cincinnati, are thus affected; and he accounts for it by the fact that these animals "are literally stuffed with fresh corn for five or six weeks before they are sent to market;" hence arises congestion of the portal circle, and inflammation of the liver and other organs, with development of acephalocysts. The cysticerci are developed in rabbits confined in damp coops, shut out from sun and air. And in the human subject, the entozoa generally are most common in moist countries.

Hydatids sometimes disappear without any obvious cause. They may suffer inflammation, leading when acute to suppuration and gangrene; or, when more chronic, to thickening and induration of the parietes, and sometimes to the cartilaginous and bony transformations. To the surrounding parts they prove mischievous by their number and their size; exciting inflammatory action, which goes on to suppuration, softening, gangrene, induration—or to ulceration, by which they make their way through the hardest structures.

Similar to the vesicular worms just discussed, and often confounded with them, but yet different in many important particulars, are the *Serous Cysts* met with in various parts of the body. They form shut sacs, like the natural serous membranes—smooth and in contact with a fluid on the internal surface, rough and adherent on the other; in size, they vary from a mustard-seed to a large melon; and in shape, are more or less globular. Like hydatids they have been observed in nearly all classes of animals; but are most frequent in the old, and, according to the author's experience, more frequent in the female than in the male. The organs which seem to be their favorite seat are the ovaries, liver, kidneys, mammæ, and testicles, to which may be added the brain of old persons. According to their structure, serous cysts may be divided into three kinds: the *simple*, which consists of a thin, delicate, transparent sac, containing a pellucid fluid in all respects similar to the serum of the blood, and provided with long slender vessels evidently derived from the adjacent parts; the *multilocular*, where the cyst is divided into compartments or cells by processes given off from the internal surface and intersecting each other in various ways; the *included*, where instead of cells, the main cyst contains several smaller ones composed of a single lamella, which is evidently a reflection from the original sac. The simple cyst is seen particularly in the ovaries, the fimbriated extremities of the Fallopian tubes, the liver, and the brain—especially in the lateral ventricles of that organ in the old. The multilocular is common in the brain around old apoplectic effusions, in the ovaries, and in the cel-

lular tissue where subjected to pressure, as on the shoulders of porters, and the knees of chambermaids. The included are also found in the ovaries, and in the broad ligaments of the uterus. The contents of these cysts while healthy are clear, transparent, of a sero-albuminous character, and somewhat saline. In a state of disease, this fluid is variously altered—becomes turbid, thickened, discolored—is mixed with blood, flakes of fibrin, and fatty matter; contains substances not found in the healthy body, as pus, tubercle, or substances peculiar to certain parts of it, as cholesterine. In the multilocular cysts several of these substances may be found at the same time in different compartments. Thus, one shall contain serum, another pus, a third blood, a fourth tubercle, or fatty, meliceritous, or atheromatous matter.

These cysts are most frequently the result of a new formation, which is dependent on some perversion of nutrition brought about by inflammatory irritation; or they are constructed out of pre-existing textures—which may be serous, as in enlargement of the Graafian vesicles—or mucous, as in the kidneys and female breast, from obstruction of the excretory ducts—there being then a true transformation. When thus formed the cyst may have several coverings. Thus in the ovaries, the parietes may be separated into three layers, one derived from the serous capsule of the vesicle of De Graaff, another from the proper fibrous coat of the ovary, and a third from the peritoneal coat of that body. Serous cysts are liable to inflammation; the contained fluid undergoes various changes; the capsule becomes dense and fibrous, and irregularly thickened, or is converted wholly or partially into cartilage and bone. The effects of the cyst on the surrounding parts resemble those arising from hydatids.

Chapter xx—Is devoted to the *Heterologous Formations*, and is one of the longest and most elaborate in the book. The term heterologous is used to designate "certain morbid products, of a solid and semi-concrete consistence, which have no resemblance whatever, or at most a very remote one, to the natural, normal, or pre-existing tissues of the body."

The word heteroclite is employed in the same sense. According to the author's views, there are but five of these products, viz: tubercle, scirrhus, encephaloid, colloid, and melanosis. These are considered in as many separate sections. The parasitic animals, as hydatids and worms, and the calcareous concretions, are on the limits of this class of productions, if indeed they do not belong to it. Any arrangement must be imperfect in the present state of the science—

"Indeed, I am not certain that the term heterologous, as applied to these formations, is not altogether ill-chosen, and out of place, since most of them are found, when carefully investigated, to have a very close resemblance, in many of their most essential features, to the normal tissues of the body. Thus, encephaloid bears a striking similitude to the substance of the brain; melanosis, to the coloring matter of the skin; scirrhus, to the dermoid texture; tubercle, at least in some of its forms, to fibro-cartilage; and colloid, to the vitreous humor of the eye."—124, 125.

The common tendency of all these formations is to destroy the tissues in which they are located; hence they have been termed malignant. *Tubercle* is not usually classed among malignant productions; but in view of its extraordinary rapidity, and its fatality—causing one-third of all the deaths that occur —it must be regarded as among the most malignant. The author defines tubercle to be "a small, solid tumor, of an irregularly spherical figure, more or less opake, of a pale yellowish color, seldom exceeding the volume of a pea, susceptible of organization, and composed of a peculiar substance, which, sooner or later, undergoes a process of decomposition." But this definition really includes only two varieties.

Tubercle may occur in almost every organ of the body; but its particular situation varies in a considerable degree according to the age of the subject. From the researches of Lombard, Rilliet and Barthez, Louis, and others, tables of which are given by the author, it may be inferred,

—"first, that, in children, tubercles not unfrequently occur in different parts of the body, without existing in the lungs;

secondly, that they are more liable to affect the lymphatic ganglions than in adults; and, thirdly, that they have a tendency to attack a much greater number of organs simultaneously or successively. It is a singular circumstance that the spleen is seldom tuberculized in adults, whilst it is very often affected in children, in the proportion nearly of one to four. From the tables of Louis and Lombard, but particularly from that of the latter, it would appear that the liver is remarkably exempt from this disease at all periods of life; a result which is, however, strikingly at variance with the statement of Rilliet and Barthez, who found this organ affected seventy-one times in three hundred and fourteen cases. Papavoine observed the liver tuberculized in more than one-fourth of his autopsies, or in fourteen children out of fifty. The intestines are affected with nearly equal frequency at both periods of life."—127, 128.

The period most liable to this deposit is between twenty and forty. It may occur, however, at any age, and even during fœtal life. The law promulgated by Louis in 1825, has been verified by every subsequent observer, viz: that after the fifteenth year, tubercles are never found in any organ unless they exist at the same time in the lungs. Another well established law, is, that in children tubercles are secreted more rapidly and in greater abundance than in adults. Rilliet and Barthez find that the periods of childhood most liable to them are from six to ten years and a half, then from eleven to fifteen, next from two to five, and lastly from one to two and a half. Barlow thinks "that any organ is most liable to become the seat of tuberculous deposit, when its vascular and functional activity bears the greatest ratio to the other organs of the body." He supports this view by reference to the greater frequency of tubercle in the brains of children, or when that organ is relatively the largest; also in the chylopoietic viscera of older children; and in the lungs of youths at the time when these organs are attaining their complete development. It is further supported, he thinks, by the suspension of tubercular disease during pregnancy; and the absence of tubercles from such portions of the lung as have been compressed in cases of pneumo-thorax following phthisis.

This deposit is observed in many of the lower animals: in these, as in man, it occurs at all ages, and its most frequent site is the lung. It is also observed in birds, reptiles, and insects.

The composition of tubercular matter has been examined by numerous observers, and with very different results. The preference is given by the author to the analysis of Hecht, who found twenty-six parts of albumen, twenty-two of gelatine, thirty-four of fibrin, and thirty of water, in one hundred and twelve parts of dense tubercular matter. Thenard found in one hundred parts of crude tubercle ninety-eight of albumen, the remainder consisting of salts of lime and soda, with a trace of iron. Lombard found nearly the same proportions. But in chalky tubercle the proportions were just reversed, the salts being ninety-six and the animal matter four.

"The discrepancies in the results of the above analyses may be accounted for by supposing that the chemical constitution of tubercular matter varies, as no doubt it does, not only in the different stages of its existence, but also in different individuals, in different situations, and in different parts even of the same organ. It is reasonable to conclude, also, that it is modified, more or less, by the state of the solids and fluids, or, in other words, by the cachexy, or constitutional peculiarity leading to its formation. In all these respects tubercular matter bears the closest resemblance to serum, lymph, and pus, which are often remarkably altered in their chemical and physical properties by the nature of the affected tissue, the state of the system, and the concomitant inflammation. In the inferior animals, the composition of this substance presents, perhaps, still greater variety than in the human subject. In the ox, there is always an unusual predominance of earthy salts, and hence the extraordinary brittleness which characterizes the morbid product. In the turtle I have seen the tubercular substance of the color and consistence of calcareous moss, or what, in mineralogical language, is termed tufa. In the sheep, horse, and some other quadrupeds, on the contrary, the animal matter is generally much greater than the saline, especially in the early stage of the disease.' —129.

There is also a difference of opinion as to what particular texture tubercle is seated in. According to Carswell it affects more particularly the mucous membranes; Cruveilhier thinks it is originally deposited in the ultimate venous radicles, as a result of capillary phlebitis; others, in the elastic cellular tissue. It may occur on the surface of a membrane, or in the parenchyma of the different organs.

Tubercle is seen in different forms. Most frequently it occurs in little grains like millet seed, whence the name *miliary;* these by coalescing form tumors varying in size from a pin-head to a billiard-ball. These little masses are sometimes enveloped by a distinct capsule, and then constitute the *encysted* tubercle; this variety is very rare. Again, instead of being collected into masses of greater or less size, the heteroclite matter is *infiltrated* into the substance of an organ, and varies from the consistence of jelly (*gelatiniform infiltration* of Laennec) to that of fibro-cartilage. Lastly, instead of being diffused in the texture of a part, it is poured out on some surface, as that of a mucous membrane, in layers of greater or less thickness, constituting the *stratiform* variety, which stands next to the miliary in frequency. A variety of miliary tubercle which has attracted a good deal of attention, are the *grey granulations* of Bayle. These occur isolated or in groups, frequently in immense numbers; they adhere to the surrounding tissue and are encircled by red vessels which occasionally extend into them. After a time they lose their greyish opaline tint, and assume the appearance of the common miliary tubercle, with which they are nearly always associated—the change beginning in the centre. Bayle thought they were of a cartilaginous nature; Laennec regarded them as nascent tubercles, an opinion in which Louis and Rokitansky concur. Chapman, with apparent gravity, thinks to decide the question by calling them *tuberculoid.*

"To me the grey granulation seems to be merely a variety of the common tubercle, modified by the action of the affected part, the state of the blood, and the condition of the general health. Serum, lymph, and pus are modified in this man-

ner, and why should not tubercle be? To maintain that the grey granulation is merely a nascent tubercle, is, to say the least, not very philosophical. That it is liable to be transformed into the common yellow tubercle is certain, but that death may, and often does take place, before any change is effected, is equally true. The grey granulation may precede the yellow tubercle, or it may be deposited simultaneously with it. Under whatever circumstances it is found, it always contains a disproportionate quantity of animal matter, and is endowed with much greater power of resisting the influence of such agents as have a tendency to destroy it. It is evidently the product of a more healthy action; it indicates a better state of the solids and fluids; in a word, it is a more plastic, organizable substance than common tubercle."—133.

As to the origin of tubercle, the author looks upon it as altered blood-plasma, the effusion of which takes place under the influence of inflammatory irritation, preceded in nearly all cases by the tubercular dyscracia or cachexy.

"In the former edition of this work I expressed the opinion that tubercles are always of inflammatory origin, and a more thorough examination of the subject since has only tended to confirm this conclusion. The concomitant action is usually very languid, or so mild and imperceptible that extensive mischief is often done before the patient is aware of it. In this respect, the development of tubercles resembles that of a chronic abscess, which is rarely characterized by any of the ordinary phenomena of phlegmasia.

"The doctrine of the inflammatory origin of this disease is countenanced, if not actually established, by the following circumstances:

"First, by chemical analysis. The experiments of Hecht, the most satisfactory yet made, afford nearly equal parts of albumen, gelatine, and fibrin; substances which, whether they occur alone, or in combination with each other, are always to be regarded, when found upon the surfaces or in the interstices of the organs, as the result of inflammatory irritation.

"Secondly, tubercular matter, as before stated, bears a very great resemblance to spoiled, degraded, or cacoplastic lymph, which is an acknowledged product of inflammation.

"Thirdly, the deposit is often excited by cold, especially when conjoined with moisture, and by unwholesome, indigestible, or innutritious food. Dyspepsia frequently leads to the

same result. By the former are produced internal congestions; by the latter, a poor and impoverished state of the the blood, so favorable to the development of tubercle.

"Fourthly, in many cases the disease is attended or preceded by hyperæmia, or active congestion. This often happens in the lungs, the pleura, peritonæum, and lymphatic ganglions.

Fifthly, the doctrine of the inflammatory origin of this deposition derives great plausibility from what occurs in the inferior animals, from mechanical irritation. In the experiments of Cruveilhier, Kay, and Saunders, well-characterized tubercles were produced in a very short time, simply by dropping mercury into the trachea. Similar effects are frequently witnessed in miners, needle-grinders, and weavers, who habitually inhale gritty or irritating matter. Persons of this description are peculiarly prone to phthisis.

"Sixthly, scirrhus and encephaloid, in fact, all carcinomatous growths, are of inflammatory origin. All these products are derived from the blood, they gradually become softened, and they ultimately destroy the tissues in which they are situated. Scirrhus, like tubercle, contains fibrin, gelatine, and albumen.

"Seventhly, there is no appreciable deposit, secretion, or effusion in any of the shut sacs, cells, or cavities of the body, which is not, strictly speaking, the result of inflammatory action, though this may be so slight as not to attract attention, or to be unattended by the ordinary phenomena of that process."—135, 136.

The author also contends for the organization of tubercles. Lugol has detected blood-vessels in this deposit; Kingston has seen them with the microscope; and Macartney has demonstrated them by injection. The following circumstance we ourselves witnessed:

"In a lung which Dr. Bayless, at my request, last summer injected with size colored with vermilion, a number of tubercles exhibited the clearest possible evidence of vascularity. On cutting into a mass of this kind, a tubercle, about the size of a duck-shot, and of a light greyish color, was divided, from the centre of which the artificial fluid, which was still warm, ran in a small jet or stream, precisely as blood flows from a divided vessel."—136.

Additional evidence is furnished by the fact that these bodies often become yellowish in jaundice; also by their softening, which generally begins in the centre, and by their conversion into cretaceous or earthy masses, a change which may begin at any part. This organization, however, is not constant. The peculiar modified character of tubercle in some situations, as upon the mucous membranes of the bronchial tubes, seminal vesicles, and uterus, is opposed to it. In these situations the deposit is more curdy and friable, and contains more earthy ingredients.

"Within the last ten years I have examined not less than ten or a dozen specimens of organized tubercles of the kidney, spleen, peritonæum, and lungs, mostly of young subjects. The tubercles were of the miliary kind, and numerous vessels, loaded with florid blood, could be seen shooting into them in every direction, many of them penetrating a considerable distance into their substance. Their vascular supply would thus seem to be derived from the tissues in which they are deposited; and this, in the generality of cases, is no doubt true; nevertheless, there is reason to believe that they occasionally possess a self-organizing power, analogous to that of the adventitious membranes of the splanchnic cavities."—137.

The vessels forming the proper circulation of tubercle have never been seen by the author; but he asserts positively that he has frequently traced vessels into the mass from the surrounding tissues. Nor have they been injected.

"Granting this to be true, and what, it may be asked, does it prove? Are we reduced to the necessity of denying the vitality of a structure, because we cannot succeed in throwing foreign substances into its vessels? If this be a fair criterion, then we must conclude that the cornea, the crystalline lens, the membrane of Jacob, the inner coat of the arteries and veins, the endocardium, and the arachnoid tunic of the brain, together with the chorion and amnion, are not organized. But who would be so silly as to do this, when daily observation demonstrates that these textures are abundantly supplied with vessels, nerves, and absorbents, though none of these tissues can be detected by inspection, no matter what methods we resort to for the purpose."—138.

Microscopically, as well as chemically, tubercle seems to differ according to the part where it is deposited, and the period at which it is examined. When recent it exhibits cells and granules, like those of plastic lymph, but no fibres are perceptible. These cells possess but a low power of development, and instead of tending to a higher organization they more frequently recede to the granular or amorphous condition. Thus, at a later period, and after the mass has increased, it is found to consist almost wholly of granular matter, with some irregular granular corpuscles, and shrivelled and imperfect cells. This is especially seen in the caseous tubercle. This increase of the mass is rarely due to intra-cellular development, or the successive evolution of cell-germs, but to the super-addition or juxta-position of new particles. Now, between coagulable lymph, and chalky or friable tubercular matter, there occurs every variety; and as the departure from the former is less, the plastic force will be greater; so that we can conceive how sometimes tubercle may grow by intussusception, and how sometimes it may be self-organized as contended for by the author.

Softening of tubercle, according to the author's views, is analogous to slow suppuration. The deposit by and by produces irritation in the tissues where it is situated; this irritation is soon communicated to the heteroclite mass, which, in consequence of its weak vital endowments, readily yields. Of this softening, and the excavations consequent upon it, and of some other changes in tubercles, we shall speak in connection with another chapter.

Melanosis has been seen by the author very seldom in his numerous autopsies, and therefore he thinks it very rare in this country. Like tubercle it occurs at all ages, though it is most frequent in the old; like it, it affects the lower animals; like it, also, it is hereditary both in the human subject and the lower animals. It is more common in white horses and cattle than colored ones. Barruel and Hecht found it to contain fibrin, united with the coloring matter of the blood, and three distinct fatty substances. Foy has found in it albumen, fibrin,

a carbonized principle supposed to be altered cruor, water, iron, and salts of lime, soda, and magnesia. The microscope shows it to consist of a fibrous network in the meshes of which are pigment cells, elongated and sometimes caudate, containing yellowish and blackish granules. It is collected in masses (tuberoid form); spread out in sheets (lamellated) and streaks (ramiform); deposited in points (punctiform); diffusely infiltrated.

Several melanotic masses may be agglomerated, constituting a rough and lobulated tumor, which in man rarely exceeds the size of the closed hand, but in the horse attains the weight of many pounds. These tumors have a thin covering formed out of the surrounding textures. They are also intersected by fibrous processes sent off from this covering or derived from the cellular tissue in which the morbid mass was originally deposited. Veins and arteries, the former predominating, ramify over the surface of the tumor, and are distributed to its interior upon the fibrous intersections; the veins are large and tortuous, and both arteries and veins are so weak that they give way in attempts to inject them. The melanotic matter itself contains no vessels, or, in other words, is not organized. On serous surfaces these tumors are sometimes pedunculated like polypes, and are always surrounded by a cyst. Rarely the melanotic matter is found in a *fluid* state, presenting the color and consistence of black ink; it has been thus observed in the serous cavities, lungs, and urinary organs.

"The *tissues* most prone to the melanotic deposition are, beyond all comparison, the cellular and adipous. Large masses of this substance are often met with under the skin, particularly of the trunk, in the mediastinal cavities, in the folds of the mesentery and omentum, and around the kidneys. In horses, the subcutaneous substance of the buttock, anus, vulva, and tail, is a very common seat of the disease. Of the different organs, the liver, lungs, spleen, eye, kidneys, and ovaries, may be enumerated as being most frequently affected. The lymphatic ganglions, especially those of the bronchiæ, are also very liable to it. The bones, fibrous and serous membranes, the pancreas, arteries, and salivary glands, are seldom impli-

cated; while the brain and spinal cord, the nerves, the veins, the muscles and their tendons, the cartilages, the synovial and mucous membranes, the uterus and mammary glands, the thyroid and thymus bodies, the prostate, testicle, seminal vesicle, and supra-renal capsule, enjoy almost an entire immunity from its invasion. Melanosis of the heart has been noticed by Gohier, Fawdington, Breschet, Halliday, Cruveilhier, Cullen, and Carswell; but this is the only portion of the system of involuntary muscles in which this disease has hitherto been found."—145.

As we have a tuberculous, so we may have a *melanotic*, diathesis. Cases are recorded where, either simultaneously or successively, a great number of organs and tissues presented this lesion.

"One of the most remarkable of the kind was published some years ago by Dr. Norris, an English physician. In this instance, not only was the external surface extensively studded with black tumors, but immense numbers were seen scattered over the stomach, intestines, mesentery, and omentum; the lymphatic ganglions, kidneys, pancreas, and liver were also more or less affected; the lungs were thickly mottled throughout the greater part of their texture; and the heart was literally encrusted with them, both externally and internally. The brain was healthy, but the dura mater was deeply involved."—146.

Melanosis is frequently combined with scirrhus, rarely with tubercle. When alone, it may remain stationary for a long time, giving rise to no inconvenience save what is caused by its size and situation. This has led many to believe that *per se* it is not malignant. When the melanotic tumor ulcerates an intractable sore is produced, having hard ragged edges, and discharging black, inky matter, mixed with more or less of blood, pus, or thin fluid from the adjacent structures. When removed, the tumors re-appear in the same place, or in some internal organ. The disease does not seem to be communicable by contact, or inoculation.

"Of the *causes* of this disease, and of the states of the system which predispose to it, nothing is known with any degree

of certainty. That the melanotic matter is derived immediately from the blood, both anatomical examination and chemical analysis abundantly show; but how far, or in what respect, this fluid is altered before the deposition is effected, are points in the history of this disease concerning which pathology and physiology are equally silent and undetermined. If we remember that melanosis is essentially composed of the same elements as the coloring matter of the skin and of the choroid coat of the eye, we may be allowed to suppose that this substance, existing in an unnatural quantity in the blood, is deposited, by an aberration of the nutritive functions of the vessels, into organs and tissues in which it is not found in the normal state. Noack regards the black matter as a secretion from the veins, an opinion in which he is joined by Dr. Hodgkin. This view, however, is entirely inadmissible on physiological grounds, inasmuch as there is no instance, so far as we know, except in the liver, in which the veins perform such an office."—146, 147.

We come next to *Scirrhus.* A good deal of confusion exists among pathologists as to the nature of this formation; partly because all malignant diseases whatever have been termed cancer; and partly because scirrhus, besides presenting some varieties, often co-exists with encephaloid. To avoid this confusion, the author defines scirrhus to be "a hard, crisp, opake substance, of a light greyish color, with dull yellowish, fibrous intersections, organized, liable to lancinating pain, occurring for the most part after the middle period of life, and passing sooner or later into ulceration."

Like the morbid products we have already noticed, scirrhus presents itself in different forms; as a tumor solitary or otherwise, an infiltration, or a lamella. The infiltrated form is infrequent, and occurs most often in the lungs, liver, uterus, kidney, and bones; the lamellated affects the submucous cellular tissue of the œsophagus, stomach, and bowels.

"In the *tuberoid* form, the most common, as we have just stated, of all, the heterologous substance forms small circumscribed nodules, the number of which, as in the liver, is sometimes very great, and the consistence of which varies between fresh pork and fibro-cartilage. Their size and shape are much

influenced by the nature of the tissues in which they are developed, and by the resistance which is offered to their progress. Single tumors of this kind are rounded, ovoidal, or conical; when, on the contrary, several are agglomerated together, they are generally very irregular, angular, and more or less lobulated. In their size they vary between a mustard-seed and an adult head, their average being that of a billiard-ball, a lemon, or an orange."

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"A scirrhous tumor creaks under the knife, is opake, firm, inelastic, and of a white bluish color, with various shades of grey, rose, and drab. These tints are most conspicuous when there is an admixture of bile, blood, or pus, as sometimes happens when the heterologous matter is very old. Thin slices of it are found to be semi-transparent, flexible, and elastic; when dried, they exhibit nearly all the properties of the horny tissue. Fibrous intersections, generally of a slight yellowish color, are seen to pervade the diseased mass, starting from the centre as their common nucleus, and radiating thence towards the circumference. These lines are merely the remains, in most cases, of the cellular substance of the affected part, and are often so arranged as to resemble very closely the fibrous structure of an unripe pear or turnip. A creamy-looking fluid is occasionally incorporated with the heteroclite mass, and constitutes the most decided evidence of its carcinomatous nature."—148, 149.

These growths occasionally contain hydatids. Serous cysts are oftener found, their contents consisting of thin, gummy, meliceric matter, and even pus. Effusions of blood are also observed, and these are thought by some to precede the formation of the cysts. A characteristic of this growth, is the absence of an enclosing capsule; the cellular membrane around old tumors is sometimes condensed, but never forms a proper covering. Scirrhus is subject to some variations in structure, and these have received different names. The *mammary sarcoma*—so called from its resemblance to the female breast—is lobulated, and intersected by fibrous bands of a dull white, bluish grey, or pale straw color; the *pancreatic*—named from its resemblance to the pancreas—consists of lobules, resolvable into granules, and separated by bands of cel-

lular tissue; the *lardaceous*—resembling a section of fresh pork—has little of the fibrous or linear arrangement of ordinary scirrhus, and the malignant disposition is not so marked in it, as it often remains in the crude state for years; the *reticular*, one of the most common, distinguishable by its white or bluish reticular figures, large bulk, and tendency to become lobulated. The solid chemical constituents of this matter, according to Foy, are albumen (42 parts in 100), white and red fatty matter, fibrin, iron, and salts of lime, soda, magnesia, and potash. The solid materials found by Hecht in matter from a scirrhus breast were gelatine, fibrin, fatty matter, and a small quantity of albumen; in matter from a scirrhous uterus, they were gelatine, fibrin, and fatty matter. These differences can only be reconciled by supposing that the composition of this matter, like that of tubercle to which it is analogous, varies according to the part of the body where it is deposited, and the stage of the disease.

Scirrhus rarely appears before the age of *thirty*, and this marks it from all the other heterologous formations. Its favorite period is between the fortieth and fiftieth years. It is hereditary. Very often it succeeds to some external violence, to syphilitic disease, suppression of the menses, and repulsion of herpetic eruptions. Quite as often there is no assignable cause.

"Scirrhus sometimes attacks a considerable number of organs in the same individual, either simultaneously, or in gradual succession. In females, it is not uncommon to find both the breast and the uterus involved at the same time. It not unfrequently co-exists with encephaloid, tubercle, melanosis, and hydatids.

"The parts of the body most liable to scirrhus are such as have a glandular structure. In females, it is most common in the breast and uterus; in males, in the testicle, penis, stomach, and rectum. In both sexes the lips, nose, and liver may be mentioned as frequent seats of it. The spleen, lungs, and kidneys are seldom affected. It is also extremely rare in the bones; and it is doubtful whether it ever occurs in the cartilages, in the serous, synovial, and fibrous textures, and in the muscles of voluntary life."—151.

According to Elliotson it attacks primarily parts not essential to life, and glands the functions of which have ceased, or have never been performed. It affects particularly the breasts of women past child-bearing, and particularly the breasts of those who have never had any children. It affects the breasts, uterus, ovaries, and testes; parts, he remarks, "not necessary to life, being all for the sake of the next generation, and not for ourselves,—except, indeed, as a gratification!"

In relation to the proximate cause, Dr. Gross does not agree with Adams, that scirrhus depends on the presence of a parasitic animal, the *carcinomatous* hydatid; nor with Hodgkin, that it arises from the growth and multiplication of serous cysts. He believes it to arise, like tubercle, from a specific inflammation which produces a plastic effusion analogous to the fibrin of the blood.

"The effusion thus produced takes place in the cellular element of our organs, the proper structure of which it gradually transforms, effaces, or destroys. That this is the case, is sufficiently evinced by what happens in the liver, kidney, and pancreas. Cases occasionally occur in which the heterologous substance can be discovered in different stages of its development, so as to enable us to determine the manner in which it is deposited. Thus, in the liver, the scirrhous matter generally appears in very minute, circumscribed points, corresponding with the granulations which are so abundantly found here in the natural state. At first, there is merely a change of color, the granulations exhibiting a pale greyish aspect, without the slightest deformity or augmentation of volume. At a somewhat later period, the little tumors are observed to be of a white milky hue, hard, dense, crisp, opake, irregularly spherical, and perfectly devoid of the original structure. Now these alterations, it is quite plain, can only be accounted for on the assumption, that, in proportion as the heterologous matter is deposited into the cellular texture of the acini of the liver, their proper parenchymatous substance, whatever it may be, together with their vessels, is obliterated by absorption, the pressure which the accidental secretion produces being fully adequate to bring about this result. Similar phenomena are to be witnessed, as scirrhus is being developed in other organs."—155.

Scirrhus is generally slow, especially when it occurs in the aged. A scirrhous breast at forty-five will run a much more rapid course than one at sixty or seventy. The irritation which it excites in the surrounding structures is also of the chronic character, leading to induration and contraction, and hence forming hard, knotty, corrugated swellings. Scirrhus, like tubercle, undergoes softening, which may commence in any part of the morbid mass; but ulceration usually sets in before it is completed. The emaciation, as remarked by Williams, accompanying the latter stages, is more extreme than in any other disease. The tissues and organs become exsanguine, and suffer both in composition and bulk. We conclude our notice of this section with the following description of an external scirrhous growth:

"Scirrhus is recognized by its circumscribed character, its hardness and incompressibility, and by the peculiar nature of the accompanying pain. The hardness is greater than that of any normal texture, save the cartilaginous and osseous. The pain is usually of a gnawing, lancinating kind, darting through the swelling in different directions, and coming on in irregular paroxysms, which, as the disease progresses, increase both in frequency and violence, as well as in duration. Sometimes it is prurient, hot, burning, or scalding, and is then commonly more permanent. At first, the tumor is movable, distinctly circumscribed, and the skin over it perfectly natural; by and by, however, it contracts adhesions, and soon becomes fixed and less defined, at the same time that its cutaneous covering experiences various alterations, both as respects its smoothness, its color, and its consistence."—156.

Encephaloid—the medullary sarcoma, fungus hæmatodes, soft cancer, medullary fungus, and spongoid inflammation of various authors—is allied to the last affection, with which, and also with tubercle, melanosis, hydatids, and other morbid growths, it often coexists. Unlike scirrhus, however, it occurs in early life as well as late, and is remarkably rapid in its progress. The lamellated and infiltrated forms are infrequent.

"In the tuberoid *variety* the heterologous matter appears in the form of a circumscribed tumor, from the size of a pea to that of an adult head. In its shape it is generally irregularly rounded, ovoidal, or even quite flat, according to the amount of pressure exerted upon it by the surrounding parts. It is composed of different lobules, which are enveloped by a thin covering, and separated from each other by delicate membranous partitions. The outer covering, evidently derived from the neighboring cellular tissue, is usually not more than half a line in thickness, easily torn, semi transparent, and of a light rose color. From its inner surface are detached numerous processes, which, dipping into the morbid growth in various directions, form so many cavities for the reception of the new deposit. These septa, which are sometimes remarkably rough and shreddy, always become more obvious after the pulpy mass is squeezed out. The cells which they form by their intersections are subject to much variety, and hence the peculiar lobulated shape which characterizes the morbid growth when occurring in parts that offer little or no obstacle to its extension."—156, 157.

The external covering is sometimes of new formation. The morbid growth is liberally endowed with blood-vessels, which are extremely large and tortuous, the veins being most numerous. Cavities containing pus, serum, or sanious fluid, are often found in the interior; and sometimes clots of blood, from rupture of the vessels, which, like those of melanosis, are exceedingly fragile. The color is generally cineritious, but runs through various shades of red and white. The consistence varies from that of cream to that of fibro-cartilage; but generally is about equal to that of the fœtal brain. Both color and consistence often vary not only in different growths, but in different parts of the same growth. Names have been given to some of the variations of structure: thus we have the hæmatoid (fungus hæmatodes of Hey) composed partly of erectile tissue, and resembling the placenta, or a clot of blood; the solanoid or potato-like; the nephroid or kidney-like; the napiform or turnip-like; and the hyaline, or, as the author calls it, the fasciculated. In chemical composition encephaloid does not differ from scirrhus, except in the presence of osmazome, and the smaller quantity of salts.

This disease occurs at all periods from fœtal life to old age; but belongs especially to early life. Of one hundred cases, collected by the author, much the largest proportion was below the fortieth year. Its most favorite seats are the eyes, bones, testicles, liver, lymphatic ganglions, and the subcutaneous cellular tissue. It has also been seen in the veins of the liver, kidney, and uterus, and may be engrafted on other growths. Encephaloid of the eye is almost peculiar to childhood. A remarkable feature of the disease is its rapid reproduction. When a tumor has been removed, the disease re-appears in the same spot, in the adjacent structures, or in the internal organs. Travers states he never knew a patient, upon whom he had operated for this affection, survive four years. It is also apt to follow the removal of a scirrhous tumor. As to its origin nothing is known. The author conjectures it to depend upon an aberration of secretion.

"The circumstance that this substance has been found in the blood, is of no small moment in the discussion of this question. It would lead to the inference that, when the sanguine fluid is surcharged with it, the cerebral matter, instead of being deposited in the brain, spinal cord, and nerves, is poured out in the meshes of the cellular element of one or more of the organs of the body. This conjecture is so much the more plausible, as encephaloid disease often arises without any assignable cause, is sometimes decidedly hereditary in its tendency, and almost always exists in several situations at the same time. Chemical analysis, also, comes to our aid here, bringing to light the important fact that the cerebral tissue and the heterologous deposit are essentially alike in their character."—162.

Analogy, he thinks, also supports this view. For example, cholesterine, peculiar to the biliary organs, has been found in a hydrocele, a tumor under the tongue, an abscess of the jaw, an ovarian cyst, and in other places.

"Encephaloid disease, after having attained a certain development, may remain stationary for years, unaccompanied by the slightest uneasiness, until the part receives some injury, when it often grows with frightful rapidity. When seated

in the subcutaneous cellular tissue, the tumor that is thus formed is at first quite movable, smooth on the surface, and devoid of sensation; but gradually, as the enlargement progresses, it becomes stationary, irregularly lobulated, elastic to the touch, and more or less painful. If allowed to proceed, the diseased mass has a tendency to open and protrude, generally by ulceration, sometimes by sloughing, and occasionally by the bursting of an abscess situated in its interior. In either case, the exposed surface presents a dark reddish fungous appearance, is highly sensitive, extremely vascular, very prone to hemorrhage, and constantly bathed with a thin, fœtid, irritating, sanious fluid, the quantity of which is sometimes quite profuse. In many instances pure blood is effused, caused by a rupture of some of the vessels of the morbid growth; and this may be so obstinate and copious as gradually to destroy the patient. Occasionally there is a discharge of thin, glairy fluid, resembling the white of egg. Such sores, besides being always highly disagreeable, never heal, from the inability of the parts to form healthy granulations. Sometimes the ulcerated mass sloughs as completely away as if it were dissected out; but these cases are uncommon, and are soon followed by a re-production of the heterologous substance."—164.

Meanwhile the lymphatic glands of the neighborhood become affected, either by sympathy or direct absorption of matter; whilst the vital powers speedily give way under all the symptoms of the cancerous cachexy.

The last of the heterologous formations is the *Colloid.* Carswell speaks of it under the head of hard cancer; Hodgkin thinks it identical with encephaloid. The author believes its characters sufficiently distinctive for separate consideration. He thus points out these characters:

"Colloid is composed of two distinct elements, bearing to each other the relation of containing and contained parts, and differing, consequently, very widely in their physical and chemical properties, as well as in their origin and mode of arrangement. The first may be considered as the fundamental structure, the base, or frame-work, inasmuch as it gives form and solidity to the whole mass, It is made up of a fibrous tissue, hard, firm, slightly elastic, and of a dull whitish, or pale greyish color, the band-like filaments of which inter-

sect each other in every direction, so as to enclose areolæ, cells, or spaces, calculated to contain the jelly like matter that is deposited within them. The vacuities thus formed present every intermediate size, between a grain of sand and a common marble. In a specimen in my possession the smallest cells are hardly as large as the most delicate pin-head; some are as big as peas, and a few are of the volume of a Lima bean. In their figure they are rounded, ovoidal, or angular; many of the most capacious are multilocular, or divided by their fibrinous septa into different compartments. In regard to their number, the loculi are too variable to admit of any definite statement. Hundreds frequently exist upon a surface not more than an inch square, and, in masses of large size, the probability is that there are myriads, many of them so minute as to be invisible with the naked eye."—166.

These cells are lined by a delicate membrane of a serous nature, connected to the fibrous structure by short cellular tissue; they communicate with each other.

"The other grand constituent of this morbid growth is an unorganizable product, the consistence of which varies from that of soft jelly, or a solution of starch, isinglass, or arrow-root, to that of custard, half-dissolved glue, or semi-concrete albumen. It is generally of a pale straw color verging on green, perfectly clear, transparent, slightly tremulous, and somewhat tenacious or clammy. In the older cells it is sometimes as firm as moist cheese or the white of a boiled egg, opake, and of a light yellowish hue, interspersed with dark points. It has also been found of a reddish color, similar to that of currant jelly, and Cruveilhier has described a variety of it which is of a pearly whiteness, with a granular fracture and feel, and the chemical constitution of caseum. Whatever, however, may be its appearance or consistence, it has seldom any adhesion to the containing cyst, and is therefore always easily enucleated. It is only when the matter is very hard, or intermixed, as it sometimes is, with flakes of lymph, that it is detached or scraped away with difficulty. Müller with the aid of the microscope twice observed acicular crystals in the jelly-like matter of preparations which had been preserved in spirits of wine; and on another occasion he saw caudate corpuscles in a colloid cancer of the mammary gland." —167.

Colloid is plainly organized, but whether its vessels are of new formation, is not known. No analysis has been made of it. The jelly-like matter contains no gelatine or casein, and undergoes no change in spirits of wine.

Colloid occurs in masses, disseminated through an organ, or solitary; and as an infiltration. The tumors are occasionally of large size; the author has one weighing about twenty-five pounds. This growth is limited in its seat; the structures most liable to it are the alimentary canal, particularly the stomach and rectum, the omentum, ovary, lower jaw, and bones of the extremities. It occurs most frequently from the thirty-fifth to the fiftieth year. It has been seen by the author in quadrupeds.

"How this disease originates, or what the causes are under the influence of which it is developed, we are entirely ignorant. Its progress is usually slow, except when the tumor is very vascular, when it is apt to grow with great rapidity. It manifests no disposition to ulcerate, as is the case with scirrhus and encephaloid; is never the seat of hemorrhage or much pain; the general health usually holds out well; and the countenance rarely acquires that sallow, cadaverous hue so common in some of the other forms of carcinoma."—170.

The microscopic character of the last three growths is essentially the same. They all consist of nucleated or nucliferous cells, contained in a fibrous or areolar structure. In scirrhus the fibrous matter is very abundant, forming the bands or striæ visible to the naked eye. In encephaloid, the fibrous structure is more delicate, and the cells, which are very numerous, are globular, like those of scirrhus, or elliptical, or spindle-shaped and caudate. In colloid, the fibrous structure is also apparent, but the cells are not juxta-posed as in scirrhus; they are encased one within the other, whilst free nuclei or cyto-blasts are observed in the areolæ. The cellular structure, as has been seen, prevails in melanosis. And there can scarcely be a doubt, that if tubercle were examined at a sufficiently early period, it would constantly be found to possess a cellular organization. Even in the caseous tubercle, after

changes have unquestionably taken place, imperfect cells and corpuscles are observed. Indeed, if we must adopt the "cell-theory," will it not be found applicable to all growths, abnormal as well as normal? Such a result may be confidently anticipated from further researches.

We here close our analysis of the first part of Professor Gross's volume. We have occupied more space than it was our intention to; but it so grew upon us, so many things presented themselves for notice, that we felt, not that we ought to say less, but that we ought to say much more. In a subsequent paper or two, we shall notice the second part devoted to special pathology. C.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

On the Acetate of Lead in Alvine Discharges.—Dr. Corrigan thus expresses himself in reference to the powers of this medicine in diarrhœas occurring towards the close of fever:

"Since I received a communication from Dr. Bardsley, recommending the trial of acetate of lead in that form of diarrhœa which comes on towards the termination of fever, and generally ends in ulceration of the Peyerian glands, I have made several clinical experiments with the view of ascertaining the powers of this remedy. I have found it exceedingly useful in controlling superabundant secretion in numerous instances. I have experienced the best effects from its employment, not only in the diarrhœa which accompanies ulceration of the mucous glands, but also in that species of diarrhœa which occurs at an earlier period of fever, and by means of which nature attempts the relief of intestinal congestion. Of its great value in the treatment of cholera I have already spoken; indeed, I do not know of any remedy by which inordinate fluxes from the bowels, whatever may be their nature, are so efficiently treated. The same remarks will apply to super-secretion from the lungs. In cases of phthisis attended with such copious secretion as to threaten suffocation, it is very beneficial: its effects are equally remarkable in chronic bronchitis with copious expectoration, and you are all aware of the great efficacy it possesses in checking hæmoptysis. I have been in the habit of prescribing it in combination with laudanum and wine vinegar; the latter I have added on the recommendation of Dr. Thompson, of London."—*Medical Times.—Ranking's Abstract.*

Statistics of the frequency of Cardiac and Pulmonary Complication in Acute Rheumatism. By P. N. LATHAM, M. D., Fellow of the Royal College of Physicians, &c.—The following remarks embody the experience of Dr. Latham, as related by him in the recently published and most valuable work, before alluded to. He observes that between the years 1836 and 1840, both inclusive, he met with 136 cases of acute rheumatism, of which 75 were males, and 61 were females.

Of the 75 males, the heart was affected in 47, unaffected in 28. Of the 47 cases, the disease was confined to the endocardium in 30, to the pericardium in 3, and affected both simultaneously in 7. In 7 others, although the heart was undoubtedly affected, the exact seat of the disease was uncertain.

Of the whole number of males in whom the heart was thus affacted, 3 died, and in these 3 both pericardium and endocardium were inflamed.

Of the 61 females, the heart was affected in 43, and not so in 18. Of the 43 cases, the seat of the disease was the endocardium alone in 33; the pericardium alone in 4; and both membranes in 4; the exact seat of the disease was doubtful in 2. None of these females died.

The account therefore of both males and females will stand thus:

No. of Cases	136
Heart exempt, - - - - - -	46
Heart affected, - - - - - -	90
Seat of the disease in the heart:	
Endocardium alone in - - - - -	63
Pericardium alone in - - - - -	7
Endocardium and pericardium in -	11
Doubtful in - - - - - -	9
Deaths - - - - - - -	3

Of the 63 patients who suffered from endocarditis, and who became convalescent, auscultation still revealed the fact, that after the inflammation had ceased, the membrane recovered complete integrity only in 17, and that it remained permanently uncured in 46. Of the 30 males, the endocardial murmur ceased entirely only in 8, while it remained as long as they continued under observation in 22. Of the 36 females, it ceased entirely only in 9; and remained in 24.

In the 136 cases which form the basis of this inquiry, the

heart was inflamed in two-thirds of the whole; the lungs only in about 1 in 5. In these cases, 24 in number, the pulmonary affection was severe; they consisted of bronchitis 8 cases; of pneumonia 18; of both combined 9 cases; of pleurisy 2. Of these 24 cases, 2 proved fatal.

Of the 46 cases of acute rheumatism, in which there was no heart complication, the lungs were likewise free in 6, or in 1 in 9 cases. On the other hand, in the 90 cases in which the heart was affected, pulmonary disease also occurred in 1 in 5.—*Ranking's Abstract.*

Case of Ileus; Portion of Intestine expelled by Stool. Recovery. By Dr. Nagel, of Lemberg.—K. J., a servant, had always enjoyed good health till within the last few years, when he became subject to frequent attacks of colic. On the evening of the 12th Feb., 1843, he was seized with violent pain at the lower part of the abdomen, accompanied with shivering, and frequent vomiting and purging. On admission into the hospital, on the morning of the 13th, he was in the following state: head hot and painful; tongue foul; thirst; abdomen swollen, and tender to the touch; skin dry; pulse full, hard and frequent; vomiting, with watery stools, tinged with blood. (Antiphlogistic treatment.)

The symptoms continued much the same till the 16th, when they diminished in intensity, and the stools were no longer tinged with blood. On the 19th, there was violent tenesmus, accompanied on the 23d with prolapsus of a portion of intestine, which, however, was reduced without causing pain.

On the 26th, the patient free from fever, and altogether in a satisfactory state; passed by stool a portion of intestine, 20 inches long, and at some points 2 inches broad; it consisted of a portion of the ileum, the cœcum, appendix vermiformis, the whole of the ascending arc and a portion of the transverse colon. The mucous membrane was everted, of a brownish color, striated with black, especially at the cœcum; it was soft and easily removed; the peritoneal coat was likewise of a brown color, and corroded, leaving bare the muscular coat, which was also destroyed at some points; for some days after, there was slight pain at the lower part of the abdomen; but on the 23d of March, the patient left the hospital perfectly cured.—*Gazette Medicale, and Edinburg Monthly Journal.—Ibid.*

Syphilis.—M. Ricord observes that the syphilitic poison is eminently alterant and disorganizing, that it produces a manifest alteration in the elements of the blood, and that the essence of the disease is hyposthenic. He reiterates his former denial that any mode of administering mercury after an infectious coition will enable us to secure the immunity for ever of the system from constitutional syphilis. He denies also that mercury produces fever, or causes falling off of the hair; on the contrary, it prevents the latter, and when fever occurs, it behooves the practitioner to look carefully to the lungs and other vital organs. In enumerating the accidents caused by mercury, he cites the case of a man under mercurial treatment, who died of suppuration of the brain, where mercury was obtained after death from the brain by chemical analysis. In a course of lectures on the subject of syphilis by M. Lallemand, now publishing in the "Medical Times," many very important points in reference to the transmission of the disease congenitally are strongly insisted upon, and illustrated by cases. Children are affected with syphilis without the mother ever having exhibited any symptoms, in which case the transmission must be by the father, who at the time of, or for some years previous to the conception of the child, may not have exhibited any evidence of the disease. Cases are detailed of lupus after primary syphilitic and gonorrheal affections; and of the most hideous leprosy, cured by antivenereals; and others tending to prove, to the contrary of the prevailing opinion, that venereal affections, when neglected or badly treated, are as fatal as formerly.—*Ranking's Abstract.*

Uterine Hemorrhage.—Few subjects connected with obstetrical science have created a greater sensation than the proposal of Drs. Radford and Simpson, to substitute extraction of the placenta, before the child, in certain cases of unavoidable hemorrhage, for the old-established rule of turning. It was not to be expected that a proceeding of so novel a character, and one so opposed to ordinary notions of correct practice, would be allowed to pass without criticism, and we accordingly find that it has met with the opposition of several accoucheurs of eminence, among whom we may mention Drs. Lee, Ashwell, &c. Of these, Dr. Lee has taken the most prominent part, having originated a controversy with Dr. Simpson, the heads of which we shall endeavor to reproduce.

In the first paper, published in the "Medical Gazette" of Sept 19, and containing the details of eight successful cases of placenta prævia, Dr. Lee condemns the new practice in the strongest terms, not only as opposed to the principles derived from the anatomical relations of the uterus, and placenta, and to the results of his own experience, but as not warranted even by the tables upon which Dr. Simpson has sought to establish the necessity for its adoption. This table Dr. Lee pronounces to be altogether fallacious, and adduces the evidence of Dr. Ramsbotham to show that Dr. Simpson has made the important error of mistaking the number of the infants lost for that of the mothers.

In reply to this communication, Dr. Simpson examines the objections of Dr. Lee seriatim. To the first of these, namely, that Dr. Lee sees no necessity for departing from the established rule of practice, he objects that if the result of the eight cases detailed by Dr. Lee was the expression of the real average of maternal danger, he should be the last to propose an alteration; but in order to show that such is not the case, he takes 61 cases which occurred to Drs. Lee and Ramsbotham, in which turning was adopted. Of this number, 24 mothers, or 1 in 2½, were lost, a mortality which, as he observes, is equal to that of the Cæsarean operation. In answer to the accusation of Dr. Lee, that he (Dr. S.) advises extraction of the placenta in preference to turning, in all cases indiscriminately, Dr. Simpson replies that such is not the fact, but that he recommends the practice only under the following circumstances: In severe cases of unavoidable hemorrhage, complicated with a rigid and undilated os uteri, in which turning would be either impossible or hazardous; in most primiparæ; in unavoidable hemorrhage, with premature labor, and an undeveloped condition of the os and cervix; in placenta presentations with distorted pelvis; in cases where the extreme exhaustion of the patient forbids turning, and when the fœtus is ascertained to be dead, or is premature, and not viable. In support of these views of the necessity of the new proceeding, eleven cases are quoted from Dr. Lee's own practice, in which unavoidable hemorrhage was complicated with rigid and undilated os uteri. Of these eleven, three mothers only survived, and of these, two very nearly perished. Dr. Lee's third objection to extraction of the placenta, that it was not adopted by the older accoucheurs, is met by Dr. Simpson with the very obvious plea, that if any novel practice is to be condemned, simply because it was not thought or approved of by the ancients, there would be at

once an end to all improvement, Dr. Simpson also demonstrates the error of Dr. Lee in asserting that Portal, one of the old authors referred to, never attempted to detach the placenta in any case, by quoting that author's own words, in which the fact of his having abstracted the placenta before the child is unequivocally expressed. Dr. Lee's fourth objection is one which apparently carries great weight, being this—that by the new practice the child must inevitably be sacrified. To this Dr. Simpson replies that, according to Dr. Lee's own showing, 65 per cent. of the infants perished under the operation of turning, in actual numbers 15 out of 23 in which the result is mentioned; while of 106 cases previously reported (Lond. and Edin. Monthly Journal, March, 1845), in which the placenta was spontaeously expelled before the child, 31 per cent. were saved, so that in this respect there is too little difference in mortality, to found an objection upon. "Besides," says Dr. Simpson, "the cases in which extraction of the placenta is to be advised, are exactly those in which the fœtus may be expected to be lost under any mode of treatment."

In answer to Dr. Lee's objection, upon the score of inaccuracy, Dr. Simpson refers the reader to a series of letters from Dr. Ramsbotham and Dr. Lee, which show that inaccuracies have crept into the statements of both parties, and that in this respect Dr. Lee is not less chargeable than his opponent.

The subsequent number of the same Journal contains an additional paper by Dr. Lee, in which 89 cases by Dr. Merriman, and 19 by Giffard, are tabulated. In the former of these there is evidently a mistake; 59 mothers out of 78, in which turning was adopted, being represented as having perished; while Dr. Merriman expressly states that he lost only 19; the numbers should clearly be reversed, but even this would make a maternal mortality of 1 in 4, not much short of that asserted by Dr. Simpson. In the 19 cases related by Giffard 5 died, also about 1 in 4, but these, Dr. Lee observes, perished from loss of blood prior to turning, and not in consequence of that operation.

It must be obvious, from the above imperfect abstract of this important controversy, that neither party is exactly in a condition to establish his position; statistical data, of *undoubted* accuracy, being absolutely necessary for so doing.—Looking, therefore, upon the question as one still undecided, we shall proceed to mention the opinions of other writers

as to its feasibility, and to record the individual experience of those who have adopted the practice of Dr. Simpson.

Dr. Ashwell expresses his doubt of the correctness of Dr. Simpson's assertion, that the maternal deaths under the operation of turning in unavoidable hemorrhage are as high as 1 in 3. He states that in his own practice, he has lost only 2 out of 20; and that in the practice of the lying-in charity of Guy's Hospital, 2 cases in 14 only proved fatal. This writer also questions the fact upon which, as we have before said, Dr. Simpson bases the propriety of his operation, viz: that the blood in hemorrhage from placental presentation comes from the detached placenta. He shows satisfactorily that Dr. Lee is correct in denying the possibility of such an occurrence, as, in the first place, the decidual vessels are too small to allow of the terrific gushes of blood which are witnessed in this form of hemorrhage, and, moreover, that in consequence of the cellular structure of the placenta, its meshes become almost necessarily plugged by coagulated blood. As regards the new practice, Dr. Ashwell observes that it rarely requires to be employed, and never can be without risk to the mother, and certain death to the child. He thinks that in all cases in which the placenta could be safely removed, a little patience would also accomplish sufficient dilatation of the os uteri to admit of turning.

An opinion similar to the above is also expressed by Mr. Crowfoot, who has been fortunate enough not to lose a single patient in eleven cases of turning under unavoidable hemorrhage. Of the infants 4 perished. In two other cases, however, in which, from the quantity of blood lost, the fœtuses were evidently dead, Mr. Crowfoot admits that he should have advised extraction of the placenta had he been aware of its effect upon the hemorrhage. Mr. Newnham, of Farnham, likewise offers a somewhat qualified opposition to the practice, thinking it advisable in some cases where it may be necessary to diminish the size of the head in consequence of deformed pelvis; objecting to it as a general rule. It must, however, be remembered that neither Dr. Simpson nor Dr. Radford contends for its general operation.

The periodical press during the last six months contains several cases in which the new practice has been successfully adopted as regards the mother. The principal of these, to which the references will be found below, are as follows: Two cases by Messrs. Wilkinson and Tennent; one by Mr. Greenhow; one by Mr. Jones, of Llanfair; one by Mr. Parker of Bridgewater; one by Mr. Walker, of Chesterfield (in

this case hemorrhage ceased as soon as the placenta was removed, but turning was subsequently necessary); two cases by Mr. Favell, of Sheffield, in which the placenta was spontaneously expelled without hemorrhage; one by Dr. Maclean; one by Mr. Hutchinson; one by by Mr. Hickings, in which he believes that the earlier abstraction of the placenta would have prevented the alarming hemorrhage which had occurred; and, lastly, one by Mr. Wells.

The subject of accidental uterine hemorrhage has been brought before the profession by Mr. Adams, of Banchory. The views of the writer as to the source of its hemorrhage are greatly at variance with generally received opinions, as will be seen from the following conclusions:

"1. That the doctrine generally taught, namely, that in floodings after delivery the blood escapes by exudation from the placental vessels of the uterus, is founded on a mistaken hypothesis regarding the construction of the placenta; while the symptoms of the case which were supposed to uphold the doctrine of uterine torpor, that is to say, the flaccidity of the womb when felt externally, and its distension and relaxation as discovered by the introduction of the hand, are to be regarded as the effects, and not the causes, of the flow of blood.

"2. That all the phenomena of the case are satisfactorily accounted for upon the supposition that the hemorrhage proceeds from lesions which are proved to be of no uncommon occurrence, about the uterus and perineum after delivery, but that analogy would lead to the conclusion that they sometimes proceed simply from violent action of the uterine exhalents.

"3. That there is no reason from analogy to suppose that blood would flow from an organ or member, merely because it is in a relaxed state, provided it had sustained no solution of continuity.

"4. That it has been demonstrably proved that contraction of the uterus is no safeguard against flooding, and that flooding is not necessarily the consequence of non-contraction after delivery.

"5. That the facts and circumstances connected with the Cæsarean operation, and the removal of the placenta in inertia of the womb, militate strongly against the established, opinion, that flooding is apt to arise from non-contraction, or sudden emptying of the womb.

"6. That, beyond all dispute, instrumental and precipitate

deliveries are those in which floodings are of the most frequent occurrence; and it is well ascertained that lacerations are common in both these cases.

"7. That the introduction of the hand into the uterus, with the intention of stimulating the organ, or compressing the bleeding point, is a practice highly dangerous, tending to produce increased determination of blood to the part, syncope, and convulsions; and that the only circumstance which could justify the most gentle modification of this practice is the existence of a coagulum in the vagina or womb.

"8. That, agreeably to my own experience, laying the head low, exposing the patient to a current of cool air, applying cold cloths to the parts, with small doses of opium and gentle compression of the abdomen, are means which will rarely fail to arrest the flow of blood; but that in extreme cases it may be warrantable to try to ascertain the situation of the bleeding point, and secure it by surgical means.

"9. That, as far as can be ascertained, fatal results under this mild system of treatment in former ages were of much more unfrequent occurrence than they have been under the harsh mode of treatment pursued for sometime past.

"Finally, that the flooding which follows delivery has none of the characters of a passive hemorrhage, as has been generally taught of late, but is to be referred to the class of active hemorrhages, and treated upon the principles applicable to them."—*Ibid.*

Cases in Obstetric Practice. By W. Franklin Barr, M. D., of Greenville, Tenn.—I. Dysmenorrhœa.—*A case cured with Extract Stramonium and Prussiate of Iron.*—I was called to see Mrs. G., a middle aged woman, the mother of seven children, spare make, and of laborious habit. I found her laboring under the following symptoms: Violent pain in the head; dry skin; pulse of natural size, but frequent; bowels constipated; tongue covered with white fur, with clean edges; pains in the back, hips, loins, thighs, and hypogastrium, resembling those of parturition—which were followed by profuse discharge, that would debilitate her very much, but which relieved her of pain until another paroxysm. Each discharge would be preceded by the pains mentioned above of a character, and which, in her own language, were "as

severe as those attending the birth of any child she ever had."

She had been laboring under this affection for eight or nine months; the catamenia returning at irregular periods of three or four weeks. During the first two or three menstrual periods, the discharge was accompanied with coagula, at the fourth with a pseudo-membranous substance, (according to her account,) "about the size of a placenta." Since then, no coagula or membranous substance has accompanied the discharges. Her general health was much impaired,—so much so that she had been unable to attend to her work for sometime. The lumbar vertebræ were tender on pressure; pubic region tender during menstrual period.

She had been under the attention of another physician—I being requested by him to visit her when I did, as he was unable to go himself. I found, from the medicine left by him that he was treating her for menorrhagia. He had given opium and acetate of lead, to be taken at each menstrual stage; and nothing in the *interval.* As this remedy relieved the pain and checked the discharges, I requested her to continue it—only leaving some purgative medicine, as her bowels were constipated, and recommended a blister to the lumbar vertebræ.

As the attending physician intended leaving the country, the case was placed in my care. To effect a cure, I prescribed Dewees' laxative pills to keep the bowels in a soluble condition, five grains of prussiate of iron three times a day, and four days previous to the return of the attack, one-fourth of a grain of the extract of strmonium, three times a day, until it produced vertigo, when it was to be discontinued until this subsided, when it was to be resumed. If the pains were severe on the return of the catamenia, 8 grains camphor and 4 grains pulv. Doveri, every two hours until relief was given. Flannel was directed to be worn next the skin. As there were symptoms of prolapsus uteri, directed recumbent position, injection decoction red oak bark, and the T bandage

The *first* return of the catamenia after using the above remedies was attended with no more pain than she had experienced before marriage, and no more than generally falls to the lot of females at this time. The symptoms of procedentia were also removed.

The remedies were continued for about four months, when

I ceased my attention. Her general health is now good, and she has become somewhat fleshy.

II. *Ergot in Uterine Hemorrhage.*—May 1st. I was called to see Mrs. C.—she had been laboring under uterine hemorrhage for a day. Her husband, being a physician, had prescribed for her himself. He had given ipecacuhana by itself, made applications to the vulva, &c. Her bowels had been operated upon by a cathartic. I prescribed opium, acetate of lead, and ipecac. in combination. This was continued for two days, but seemed to do but little good. I then prescribed ergot in doses of 10 grains every four hours. There was no return of the hemorrhage after the first dose had been given. She recovered without taking another dose. —*S. Med. & Surg. Jour.*

Laudanum in the Delirium occurring in the last stage of Dothinenteritis.—Dr. Morand, of Tours, is of opinion that great advantage may be derived from certain preparations of opium in the treatment of the delirium which supervenes in the last stage of the dothinenteritis. He relates a case of a girl 11 years of age, who, on the 32d day of an attack of dothinenteritis, seemed in the most hopeless condition. She had continued delirium, and screamed without cessation. A potion containing fifteen drops of laudunum was ordered to be given every hour, which quieted her cries, procured sleep, and in 18 hours the delirium ceased. The potion was afterwards continued for a few days to prevent a return of the delirium, and with a nourishing regimen the patient entirely recovered.—*Jour. de Méd.—Ibid.*

Report of the Committee of the New York State Medical Society concerning the National Medical Convention.—The Committee appointed at the last Annual Meeting of the New York State Medical Society, to carry into effect a resolution passed at the same meeting inviting a National Medical Convention, in May next, would respectfully report as follows:—

In the early part of last season the Committee, through their chairman, addressed a circular containing the preamble

and resolutions of the society, with such comments as were deemed advisable, to all the State medical societies and medical Colleges in the United States, as far as the existence of such societies and colleges could be ascertained. And in those States where neither State societies nor colleges existed, a circular was addressed to some leading member of the profession, inviting him to take measures for having his State represented in the proposed convention. Replies to these circulars and letters have been received from the following officers of medical societies and colleges, and private members of the profession, viz:

Drs. W. W. Morris, of Dover, Delaware State; A. H. Buchanan, of Tennessee; W. P. Johnston, of Washington city; T. T. Hewson, R. M. Huston, and W. E. Thorne, of Philadelphia; Luther Ticknor, Connecticut; W. H. McKee, of N. Carolina; E. H. Pearle, of Hanover; Paul F. Eve, of Georgia; J. H. Thompson, of New Jersey; J. W. Davis, of Indiana; A. Twitchell, of New Hampshire; John W. Draper, A. H. Stevens, Willard Parker, and C. A. Lee, of New York; J. Drake, of Ohio; Lawson, of Kentucky, and Carpenter, of Louisiana.

Delegates have been freely pledged from societies and colleges in Maine, New Hampshire, Connecticut, New Jersey, Delaware, District of Columbia, South Carolina, Georgia, Mississippi, Louisiana, Tennessee, Kentucky, Ohio, Indiana, and New York. The medical schools of Philadelphia are the only ones from which replies have been received, that decline sending delegates, and giving a hearty support to the proposed measure. Nearly every medical journal throughout the whole Union has not only favorably noticed, but warmly commended the holding of such a convention.

There are some institutions from whom no replies have been received; but, from information obtained from other sources, there is good reason for believing that most if not all these will appoint delegates as soon as they are fully assured that the convention *will* be held. It will thus be seen that in far the larger part of our Union, the invitation of this society has met with a prompt and hearty response from the profession; and it is with much regret that we find even a few institutions declining to take any part in so important a movement. But when we consider the wide extent of our territory, and the great number of our institutions, all engaged, we should hope, in a generous rivalry with each other, the expression in favor of a convention is certainly more

unanimous and more promising of good than could have been anticipated. Indeed the leading and influential members of the medical profession have long felt the necessity of some national action; some central point of influence around which the active and choice spirits of the whole profession can rally, and from which may be made radiate an elevating, healthful, and nationalizing influence over the whole country.

Hence, it only remains for this society to carry out the work it has so nobly commenced. The faculty in the New York University have very generously tendered to this society, the use of any room or rooms in their college edifice, that may be desired, for the convention to meet in. Some State societies and colleges have already appointed their delegates, while others have expressed a desire that the society would fix the number of delegates to be appointed by each society and college. For the purpose of furthering the objects in view, your committee would respectfully submit the following resolutions, viz:—

1st. *Resolved*, That the preamble and resolutions passed by this society, at its annual session, Feb. 6th, 1845, did not contemplate the appointment of delegates to the National Convention, by county or merely local societies, in those States where delegates *are* appointed by a regularly organized *State* society.

2d. *Resolved*, That as some societies and colleges have already appointed their delegates, therefore, the number to be appointed by any one of these institutions should be left entirely to the discretion of the appointing body.

3d. *Resolved*, That sixteen delegates be appointed to represent this society in the proposed National Convention, viz: two from each senatorial district in the State.

4th. *Resolved*, That this society accept the offer of the faculty in the New York University, respecting their rooms; and consequently that the members of said National Convention are invited to assemble in the college edifice of the New York University, at 10 o'clock, A.M., on the *first Tuesday* in May next.

5th. *Resolved*, That a committee of three be appointed to continue the efforts to further the objects of the proposed convention; and to exert all their influence to make it truly *National* in composition and action.

6th. *Resolved*, That the above Committee be authorized to invite the superintendents of lunatic asylums in the several States to attend the Convention.

7th. *Resolved*, That the committee be further authorized and enjoined to send a copy of this report, together with the action of this society thereon, to all the medical journals in the United States, with a request that they publish the same, on or before the 1st of April next.

W. S. Davis,
James McNaughton, } Committee.
Peter Van Buren,

Albany, Feb. 3, 2846.

New York Jour. Med.

Animalcules in the Oil-Tubes of the Skin.—The following information may possibly be new to some of our readers:

"The animalcule of the skin," says Mr. Wilson, "is found in the oil-tubes, whenever there exists any disposition to the unnatural accumulation of their contents; it is found in number varying from one or two to twenty, in the interior of the little grooved cylinder, which is squeezed out by pressure of the fingers; and this in an apparently perfect state of the health of the skin, if it can be said to be in health when its functions are performed in a torpid manner. Now, as in the majority of mankind, and certainly in all the inhabitants of cities and large towns, the skin is more or less torpid in its functions, so the presence of this animal in the skin is the rule, its absence the exception; I have found it in all ages, from youth to old age, more numerously, it is true, at the latter than at the former period, and in great and remarkable numbers during sickness. Under these circumstances I see no other conclusion open, than to assume that it performs some beneficent purpose in the economy of the skin, that purpose being, according to my belief, the disintegration of the over-distended cells, and the stimulation of their tubes to perform their office more efficiently. In corroboration of this view, is the fact, that these little creatures increase in number when the vital powers decline, so that when the energies of the system are reduced by disease, and when the skin, participating in the reduction, is unable alone to fulfil its functions correctly, these little beings are produced to aid in the work."

The British and Foreign Review objects to the name *Entozoon Folliculorum*, by which Mr. Wilson designates this animal, and says that "it unites the characters of the higher annelida, or worm-tribe of the lower arachnida or spider-

tribe, and of the lower crustacea or crab-tribe, to such a degree, and it is yet doubtful which class ought to afford it a place. The investigator of the history of this parasite need certainly be in no lack of subjects for examination, for, strange to say, it is one of the most readily procurable of all living beings, especially in a town-population. Here, as elsewhere," continues the writer, "we see how nature manages to compensate one class for the exemption they may enjoy from the evils incident to another. The delicate town-bred lady of fashion, in ascending from her carriage, shrinks instinctively from the mass of rags, filth, and vermin, which is brought into contiguity with her precious person by some pertinacious beggar, ignorant all the while that her sebacious follicles give board and lodging to a host of parasites, whose number may equal that of the various kinds of 'small deer' that nestle in the matted hair and tattered garments of the fellow-being whom she regards with so much loathing.—'Where ignorance is bliss, 'tis folly to be wise.'"—*Ibid.*

Dr. Golding Bird on warm moist Air in Bronchial Inflammation.—Were I endeavoring to point out one class of cases more distressing and anxious than another, I would sketch one of pneumonia, or capillary bronchitis, affecting a part of both lungs, and occurring in a child barely emerging from the influence of the poison of measles or hooping cough. The little sufferer, weak from previous disease, tosses restlessly from side to side, with its head thrown back over the pillow or nurse's lap, to straighten the trachea, snatching short and imperfect slumbers, or rather moments of stupor, only to awaken to fresh distress; the livid hue of the finger-nails and toes, the dusky face, parched lips, distended and parting nostrils, the lustrous, prominent eye, present a graphic picture of impending suffocation; whilst the hurried respiration, the catching at the bed-clothes, or throwing the arms over the head, show the efforts made by the child to facilitate the distention of the obstructed lungs. If pneumonia be alone present, all these symptioms, it must be recollected, often exist without a particle of cough; the most severe cases of this kind I have met with, have been absolutely free from it, and have been often mistaken for mere fever. It must never, moreover, be forgotten, that whilst in the adult pneumonia is frequently limited to one lung, in children it usually affects both. The possible absence of violent inflammatory fever,

also, must never be forgotten, for ignorance of the fact has often caused the disease to be overlooked. The prominent symptoms of the most dreaded variety, or suffocative pneumonia, are, diminished oxygenation of the blood, and depressed state of the cerebral functions. The little patients are often affected with great somnolence, pale and livid complexion; the glowing heat of surface soon disappears, and is followed by cold and often violet-colored extremities. The respiration is often nearly entirely performed by aid of the abdominal muscles, the action of the diaphragm being violent; a state of things familiar to every physician, and to which attention has of late been especially directed by a German author, Dr. Berg. The distress of the little patient becomes much greater if capillary bronchitis, or inflammation of the lining membrane of the smaller tubes, be superadded; for here, in addition to the consolidation of the hepatized portion of the lung, the very route to the cells is first obstructed by the swollen and congested state of the lining membrane, and afterwards by the exudation of a stiff, viscid, gum-like mucus. And if the larger tubes become involved, as is usually the case after hooping cough, the loud and coarse râle, or hooping sounds, show how great is the effort required to expand the lungs.

In the treatment of these cases, all the therapeutical remedies at our command are too frequently put in requisition in vain; the mercury, antimony, opium and depletion, are all called upon for their assistance; and although, fortunately often with success, still we have sometimes to deplore their inefficiency, and even occasionally to doubt whether, after all, the disease has not been over-treated; and to inquire whether, in efforts to save, the catastrophe has not been rather accelerated than averted.

It is in these cases that I think we possess a most energetic remedial agent, in the shape of an appeal to the functions of the skin and mucous membrane of the air-passages, which, while its effects are always palliative, and often successful, can never be regarded as dangerous. Even the temporary relief afforded by the warm bath, familiar to all practitioners, shows how much is gained by calling upon the skin to do its duty. But even here, too carelessly as this remedy is often used, I think I have seen more ultimate harm than good accrue, by rendering the child more susceptible to the influence of the cold air which it inspires.

In cases of this kind I would urge the practitioner not to consider he has done his best towards saving his little patient,

until he has placed the child in an atmosphere, the temperature and moisture of which shall appeal to the skin, and relieve the inflamed tissue. The mode in which I am accustomed to effect this is as follows:

Selecting, if the choice be permitted, a bed-room as small and as free from draughts of air as possible, the windows are carefully closed, and if the casements do not fit accurately, strips of paper should be pasted over the junctures. A stout sheet or blanket should then be fastened with a nail or two to the lintel of the door, outside, so as to hang down and prevent currents of cold air from entering the room during the ingress and egress of the attendants, a large fire being lighted in the grate, which should never be allowed to go out during the treatment. A thermometer should be suspended over the patient's bed, so as to be about two or three feet from its centre, and carefully watched. The indications of this instrument must constitute the sole guide for raising or depressing the fire, and a temperature of from 70° to 78° should be constantly maintained. A large kettle of water is placed on the hob, and kept boiling, so that a current of steam may be constantly poured into the room from its spout, which, for this purpose, must be enlarged by the addition of a few feet of gas-pipe, and until this be procured, with a tube of stiff paper or thin mill-board.

By these precautions the room may, without the slightest difficulty, be kept at a nearly constant temperature for the requisite time. Indeed, it is remarkable how little variation is observed in the thermometric indications, when the most ordinary care is taken to prevent the entrance of long-continued draughts of air. Let us now suppose that a child, the subject of capillary bronchitis or pneumonia, be exposed to the influence of a bed-room arranged with these precautions, placed in bed, and supplied freely with diluents, as tea, toast-water, or common water, for which the little patients generally crave, and inquire what are the probable results of this treatment, independent of any other.—*London Lancet.*

THE WESTERN JOURNAL.

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LOUISVILLE, APRIL 1, 1846.

COMMENCEMENT IN THE MEDICAL INSTITUTE.

At the eighth public Commencement in the Medical Insitute, held on the 9th of March last, the degree of Doctor of Medicine was conferred on seventy-three young gentlemen, who had undergone satisfactory examinations before the Faculty, and otherwise complied with the requirements of the institution. Of this number, twenty-one were from Kentucky, seventeen from Tennessee, eleven from Mississippi, and the remaining twenty-four from nearly half that number of States. Rarely, in our opinion, has a more gifted or promising body of young men gone forth from any of our medical schools than the last graduating class of the Institute. Many of them have given proofs of a strength and activity of mind, a ripeness of attainment, and a power of sustained application which betoken the happiest results. Every friend of sound medical learning will unite with us in the prayer, that these promises may be fulfilled, and that each succeeding class, in all our schools, may be an improvement upon all that have gone before.

The valedictory address to the graduates was delivered by Professor Miller, and was appropriate, judicious and eloquent. It inculcated in forcible language the code of ethics which must be observed in the professional intercourse of medical men, if they would have

peace among themselves, or enjoy the respect of society. It urged with especial emphasis the duty of the physician to respect the professional character of his brethren, and never by word, look, or action attempt to disturb the confidence reposed in them by their patients.

In the conclusion of his address, Professor Miller adverted to the new title which the Medical Institute is about to assume in becoming a department of the University of Louisville. This, he stated, was the completion of the design originally entertained by the founders of the school. From the beginning, it was purposed to establish other departments in connexion with the Institute, and embrace all under a common charter. The charter which was granted by the Legislature at its last session was drawn up by the friends of the medical school, and fully secures to it all its emoluments, property, and privileges. Its friends have cause to congratulate themselves that it is thus placed beyond the reach of any further agitation, and may pursue an uninterrupted career of prosperity and usefulness.

The *honorary* degree of Doctor of Medicine was at the same time conferred on Mr. Josiah Gregg, of Missouri, author of '*Commerce of the Prairies*;' on Dr. A. W. Chapman, of Apalachicola, Florida; and on Dr. John S. Lewright, of Kentucky.

Robert M. Spencer, M. D., of Kentucky, a graduate of the Medical Department of Transylvania University, J. H. Crews, M. D., of Ohio, a graduate of the Medical College of Ohio, and Geo. A. J. Mayfield, M.D., of Tennessee, a graduate of the University of Pennsylvania, were admitted to the "*ad eundem*" Degree in the Medical Institute.

ANALYSIS OF THE BOSTON WATERS.

Preparatory to supplying the city of Boston with pure water, steps have been taken by the commissioners in charge of the work to have the water of the various ponds and rivers in the neighborhood of the city subjected to a rigid chemical analysis. The report of Mr. B. Silliman, Jr., on these waters, a copy of which is before us, is a very able document, and must prove an invaluable guide to the commissioners. After giving the quantity of every foreign ingredient discovered in each of the waters, the author details the results of his

experments undertaken with the view of ascertaining their action upon leaden pipes. He found that *pure* water acted on the lead more than any other, which is in accordance with what chemists had oserved before, that saline matters protect lead to a great extent against the action of water. He observed also, that the water most abundant in carbonic acid, and which contained more than an. average amount of solid matter, "had no effect whatever on the lead." These facts, as he states, "certainly appear anomalous, and lead to the conclusion that we are yet without the means of establishing any general rule by which we may judge whether any given water will act on lead; and that actual experience in every case is required before the question can be decided." His practical inference is, that, considering the deadly nature of lead poison, and the fact that the metal is dissolved by so many natural waters, "it is the course of safety to avoid, as far as possible, the use of lead pipes for conveying water which is to be used for drinking."

Mr. Silliman is devoting himself especially to analytical chemistry, in which useful walk of science he is already becoming distinguished.

MEDICAL OBEDIENCE.

So the introductory lecture of Professor Darrach, of the Pennsylvania Medical College, is entitled. Obedience to the command, "*Go heal the sick,*" is the subject of his lecture—an earnest, poetical, pious discourse, written in a hurried conversational style, but full of statistics, anecdotes, and just reflections. We give a specimen: "On a visit of respect to Scarpa, in 1821, he told me that he had been constantly in the labor of his profession of 62 years, and that he still loved it. He was then at the age of 80 years, and had just published a folio volume of observations and recent experiments on the proper method of tying arteries. And, said he, in the course of conversation, at 18 years of age I, on a medical tour, was the means of introducing the use of the catheter from Paris into London, and the practice of dispensing with the charpee from London into Paris."

THE MEDICAL PROFESSION IN THE UNITED STATES.

The condition of the medical profession in this country, and the causes which tend to impede its progress, are topics very ably discussed by Dr. Stewart, of New York, in a pamphlet of 30 pages which we have read with deep interest. We cannot say we read it with pleasure, for a contemplation of the evils which beset the profession is calculated to inspire very different emotions. Still, it becomes us to look the evils in the face, and with a resolute spirit set about their correction. "Old sores," it has been said, "need vinegar as well as oil," and in that view of the case, Dr. Stewart has applied the corrosive. He compares, in the subjoined passage, the system of medical education in Europe with that which prevails in our country:

"All the more important subjects, and especially practical anatomy, and clinical medicine and surgery, are there thoroughly taught. The student is not only required to dissect, but is examined on Dissection, whereas, here a very irregular attendance on the dissecting-room, probably during a few evenings only in each session, is all that is expected of our pupils, and indeed, in some cases, they are notified publicly, beforehand, that though advised to do so, they will not be required to dissect in reality. Little or no attention to hospital practice is required from the student here. Some of our colleges exact from him that he shall purchase a ticket of admission to a hospital, when one is convenient, but there the matter rests. And this even is not always required; and if not obligatory on them to do so, how can it be expected that students, when they have so much else to attend to, will go to the expense of procuring a ticket, or after getting it, will take the trouble to attend the practice of these institutions? That they do not do so, is I think, very evident, from the fact that out of upwards of six hundred in attendance at the New York Colleges during the present session, only about one in eight have applied for the privilege of visiting our City Hospital! And yet this is known to be the only one here to which they can obtain access. The all important branch of clinical instruction then is not taught to students here, at all events in a satisfactory manner; for the cliniques attached to the schools in this city, in Philadelphia, and elsewhere, though useful, can never present to them the advantages that they would derive from examining patients, and following their treatment, in a regular and well organized hospital, and under the direction of qualified teachers."

Having exhibited the profession as it is, Dr. S. enumerates the causes which have brought it to its present condition, and are still opposed to its improvement. We would gladly copy from the discourse largely if we had space. Its ethics are of the purest order, and its admonitions and suggestions worthy of the serious regard of all American physicians.

RIDDELL ON THE CONSTITUTION OF MATTER.

This is the subject of a learned article in the New Orleans Journal of Medicine, for March, which has been issued in pamphlet form. It is not a subject to interest the majority of readers, but a few, it is to be hoped, will meet with it, who can do justice to the recondite speculations of the author. He has ventured to set up opinions at variance with some of the received doctrines of natural science, and sustains them by an imposing array of arguments, but whether conclusively or not we leave to others more versed in mathematical science than ourselves to decide. The conclusion of Dr. Riddell's paper is beautiful, and we take great pleasure in quoting it:

"Deeply impressed with the conviction, that all the current physical phenomena of the universe are but rational and regular sequences from rational and regular causes, I have discarded the idea of occult and inherent qualities. Where the relation of things seams occult and incomprehensible, I have uniformly ventured to infer that they merely seem so, because the true and essential relations have not yet been developed. When we look abroad into the workings of nature, few, comparatively, are the physical objects and relations which we truly comprehend: and countless, those which to us are dim and distant forms; admonishing us of our weakness, and of our infinitely small importance in the grand system of the universe. But let us not despair. For since we see that neither matter nor motion admits of natural annihilation, but that both possess the passive attributes of endless perpetuity; let us exult in the firm conviction, which by parity of reason forces itself upon us, that the gift of the Divine Being also,—that more subtle portion of ourselves which thinks, remembers and reasons, is destined to immortality."

NATIONAL MEDICAL CONVENTION.

We exceedingly regret to see that there is not likely to be a full representation of the medical schools of the country at the proposed convention in May. The schools of Philadelphia, it is announced, have declined sending delegates. Professor Caldwell was appointed to represent the Medical Institute of Louisville, but we are sorry to learn from him that he will not be able to attend. It is greatly to be wished that there could be a general attendance from every quarter of the Union. Good could not fail to grow out of such a convention, and we still hope that the assemblage will be large.

THE NATURALIST.

This is the name of a periodical issued from Franklin College, near Nashville, Tennessee, by the Faculty of the College. The January number has appeared, and contains papers by Professors Loomis, Fanning, Fowler, and Eichbaum. It is to be published in monthly numbers of 48 pages, at $2 in advance, $2 50 if payment be delayed over three months, and $3 if delayed over six months. We tender to the editors our best wishes for the success of their enterprize, and run no risk in promising that its patrons will find it an instructive and valuable journal. We hope it will be sustained.

HYPOTHESES IN MEDICINE.

It is the fashion in our day to condemn hypothesis in medicine, and insist upon facts, as all in all. But have we, in reality, discarded hypothesis? Is there any thinking man who has not his hypothesis? A very distinguished statesman, who is also a farmer, once remarked to us that, although he was distrustful of theories, he had a theory that "dun mares produced larger mule colts than those of any other color." This was his hypothesis, founded on a certain number of observations, and whether true or not, observation must decide. Sir. Isaac Newton, driven by the plague from London, and sitting in a garden, fell into a train of speculation on the power of gravity, the result of which was a conjecture that the same force

which brought the falling apple to the ground reached to the moon, and kept her in her orbit. This was his hypothesis, distrusted long by himself, and not rendered certain by calculations until it had occupied his great mind for sixteen years. And so, had not Columbus his hypothesis when he set sail in search of the new world? Lavoisier conjectured that soda and potash were, at bottom, metals; and this became the hypothesis of Davy, who made it something more by his famous feat with the galvanic battery. Newton seeing that the diamond, like unctuous bodies, refracted the rays of light powerfully, conceived the thought that, like those bodies, diamond contained something which was combustible; and Lavoisier embracing the hypothesis converted it into positive knowledge by the experiment of burning the precious gem in oxygen gas. But are hypotheses native to great minds alone? Do we not all daily act upon them?

The practitioner is called to the bed-side of a patient; he notes the phenomena of his case, and concludes, after the best investigation he can give it, that it is chronic hepatitis; and upon this hypothesis he bases his therapeutics. If the result prove favorable to his hypothesis he is strengthened in the conviction of its truth; and if he have a number of patients with a similar aggregate of symptoms, who recover under the same treatment, he becomes at last wedded to his hypothesis.

But this is not what is generally understood by hypothesis.—"Whatever is not deduced from the phenomena, is to be termed hypothesis;" these are the words of Newton; and in this sense, it is of hypothesis as of treason—

> "Treason does never prosper—what's the reason?
> Why, when it prospers none dare call it treason."

These lines are quoted by Dr. Bigelow in an address delivered before the Boylston Medical Society of Harvard University, which we have read with unusual pleasure. The subject of the address is "Medical Science and Medical Art," and among the topics handled by the writer with much originality is the one upon which we have bestowed the few foregoing remarks. Dr. Bigelow holds that many, if not all great discoveries in science, like those of Newton, Columbus, and Davy, 'have been preconceived before they were demonstrated.' The perversion of this is the framing of an hypothesis, and then

bending facts to sustain it. This is an abuse of facts and of reason. Facts, as he correctly observes, "are to test, to prove or disprove, not to confirm theory." And, as he continues, "the error of former science, the error of recent medicine, was not that hypotheses were made, but that they were constructed to be proved; that truth was warped and misapplied; that facts were prostituted in the cause of ignorance and prejudice." Cullen framed his theory of fever, and from that time forth held all those "facts" to be "false" which did not conform to it. Hahnemann saw in medical experience a few instances giving countenance to the law—*similia similibus curantur*, and homœopathy became his hypothesis, to which all facts were made to bend. Many more cases of the same sort might easily be cited.

Assuredly facts are not to be undervalued, for a large proportion of medical science consists of facts wholly unexplained. But we agree with Dr. Bigelow, that "facts are not the end of science;" and that "medical discovery has generally been the work of individuals, who had their hypotheses and have analyzed facts in some especial relations, and not of societies, who have collected them indiscriminately." It was upon this path that Jenner marched in his great discovery; and albeit, slowly, and with opposition, and sneers enough from his companions, for they threatened to expel him from their medical society, if he continued to harass them with the disgusting subject of vaccination.

TO CORRESPONDENTS.

We have received communications from Drs. Gordon, Fee, and Boling which will appear in our next number.

BOOKS RECEIVED.

We are indebted to the publishers for the second volume of Velpeau's great work on Surgery. An extended review of it will be prepared for an early number. We have also received a neat volume entitled a "Compendium of Chapman's Practice," which we shall sieze the first leisure hour to notice under the proper head.

THE

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OF

MEDICINE AND SURGERY.

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OF

MEDICINE AND SURGERY.

MAY, 1846.

ART. I.—*An Essay on Diet in Health and Disease.* By JOHN DAWSON, M. D., of Jamestown, Ohio.

[CONTINUED.]

DIET PROPER IN THE TREATMENT OF SEVERAL DISEASES.

To every one of any observation, the influence of a proper regimen in correcting aberrations from the common standard of health is very apparent. The physician is able to trace no small portion of his success, in the treatment of many diseases, to a proper regulation of the things designed for the purposes of nourishment; and the valetudinary may often rest his only hope of being delivered from his mental and bodily torture upon a strict observance of the rules of an enlightened system of regimen. But as these topics are fully discussed in our elementary works on hygiene, it is our intention to allude to them merely in connexion with recent

improvements—improvements growing out of researches in a branch of science which promises much in reference to enlightened views of physiology and pathology. In considering the utility of dietetic regulations in the treatment of the few diseases of which it is our purpose to speak in this paper, we shall premise the treatment of each, with some remarks on its predisposing and proximate cause, as being necessary to an understanding of the remedial relations of the different kinds of food.

The Diet in Polysarcia Adiposa.—Among the various shades of morbid action attributable, in any respect, to a want of proper dietetic regulations, is polysarcia adiposa, or obesity. As its name imports, this departure from the physiological condition is caused by abnormal depositions of fat in the cellular tissue and various organs of the body. With the inconveniences arising from this state of things, and the extent of the deposition, some of the members of our profession have themselves been familiar. Dr. Cheyne who was a voluptuary in the early part of his life, became so fat, that from 140 he attained the enormous weight of 448. So huge was his size, that in order to enter his carriage it was necessary to throw open the whole side of it. Instances are numerous of still greater development. Mr. Bright, of Malden, England, weighed 728 pounds; the celebrated Daniel Lambert 729 pounds; Mr. Cornelius, a native of this country, 720 pounds; and Dr. Elliottson gives the case of a child that, at one year of age, weighed 60 pounds. It is impossible accurately to estimate the great size and weight of the human body from morbid accumulations of fat. A healthy body is supposed to contain about $\frac{1}{5}$th of its whole weight in adipose matter. Approximation, however, to anything like correctness, as it regards the abnormal deposition, is from the inadequate character of the data, out of the question. Two-thirds of the weight of Dr. Cheyne, as we have seen, were referable to fat.

Concerning the circumstances favorable to the fixing of fat in the system, there is considerable unanimity of opinion.

As a general rule, those who have paid any attention to the subject regard the absence of activity, and excitement of all kinds, as indispensably necessary. Those engaged in feeding inferior animals confine them within narrow limits to prevent exercise, and allow of but little, or no muscular exertion. The plan of shutting them up in entire darkness to exclude the stimulus of light is now in many places successfully practiced. Castrating also the males, and removing the ovarian glands of the females, are measures, which from the success attending them, are universally adopted. In the human body the circumstances favorable to the deposition of fat, vary but slightly, if at all, from those to which we have alluded. In persons where there is no chance to take exercise, although the diet is generally regarded as poor and scanty, morbid accumulations of fat are very common. With individuals taking but little exercise, and living upon what is considered rich food, and stimulating drinks, this is also the case. In a short time, like Dr. Cheyne, they begin to experience the inconveniences of corpulency, which sooner or later give rise to diseases both of mind and body. After the cessation of the catamenia, practitioners of medicine notice that females are very apt to become loaded with fat, sometimes to an extent, from what we have witnessed, that embarasses the principal functions of life. Hereditary predisposition exerts no little agency in the production of unnecessary quantities of adipose matter. A fatty diathesis, if it might be so called, seems to run through many families, and is transmitted from parent to child. Possessed of this, some persons are tormented through life with the inconveniences incident to it, and what is still worse, all attempts at remedying it usually prove abortive.

The places where fat is found in the system vary according to a number of circumstances. In children it is found in greatest abundance immediately under the subcutaneous cellular tissue. Old persons have it deposited in the interstices of the muscular fibres. With the most constancy in all persons it is found in the orbits of the eyes, soles of the feet,

and ends of the fingers. The cellular tissue investing the bowels and various other organs of the body contain, as all know, large quantities; and in diseased conditions of the system it is found in the *substance* of the heart, liver, and kidneys. In his chapter on "*Adipose and Greasy degenerations of the Heart*," Hope says the heart is sometimes found overloaded with fat deposited between the pericardium and muscular substance, and penetrating at times between its fibres so as to attenuate its walls, and render them flabby. This author says, he has seen the *greasy* degeneration extend so as to occupy both ventricles. In that alteration of the liver called "*fatty degeneration*" pathologists usually find the oily principle collected in some one or more spots through the substance of the liver, being deposited like tubercle or pus. Experiments on the fattening of poultry with their feet tied, have developed the fact, that the liver under such circumstances takes on a state of hypertrophy, caused by the infiltration of fat into its cells. The kidneys, we are told by Andral, and other pathologists, are often found in a similar condition from depositions of fat in their cortical substance. The extension of the fatty exhalation has been such as to be found in connexion with almost every tissue, and the parenchyma of most of the organs. Besides in inflammation of the liver it is very common to find it in the blood. As yet none has been observed in the eyelid, the scrotum, or within the cavity of the cranium, except what belongs to the brain as one of its normal constituents.

In an investigation of the sources of the adipose deposition, some of the most intelligent medical men of the age have recently been engaged. Out of this labor much useful information has grown; but as yet it has not been entirely adequate to a solution of the problem. Boussingault is of the opinion, after making numerous experiments on the fattening of inferior animals, that the fat found in the human subject is not elaborated within the organism, but is derived from the food where it exists ready formed. The vegetable substances usually employed as food contain fat, he thinks,

in quantities altogether superior to what has been suspected, and really sufficient to account for all the fat fixed in the system. From the insoluble character of fat and the experiments of Magendie, who has so well established the fact that the chyle of animals fed on adipose substances contains a large quantity of fat, he concludes that the fat of the food passes through the blood into the organism without being changed in composition.

Opposed to the above theory are the views of Dumas. He holds that the fat is elaborated entirely within the body, and that it is the saccharine constituents of the food which undergo the changes necessary to its production. As is known, sugar may be regarded as a compound of carbonic acid, water, and olefiant gas. This author supposes that the olefiant gas may become detached from the other constituents, and, by taking different states of condensation, give rise to bodies which, by undergoing oxidation, would produce fat-acids, and consequently fats. The views of Dumas are thought to be strengthened by what is observed to take place in plants. The sugar of their stems disappears in about the same ratio that their seeds or fruits become charged with oleaginous matter; and it is said that all the palms elaborate sugar before producing oil. Bearing upon the same point also are the experiments of Huber, who found that bees fed exclusively on sugar did not lose the power of producing wax. With these proofs of the plausibility of Dumas's theory is associated the remarkable fact of the conversion of sugar into butyric acid, observed by Pelouze and Gelis. This may be done by "mixing a small quantity of caseum with a solution of sugar, and adding a sufficiency of chalk to neutralize the acid as it is formed. Placed in a temperature of 77° to 86° Fah. this mixture passes through a series of changes, the last of which is the butyric fermentation."—Boussingault.

With Dumas, the philosopher of Giessen agrees that fat is formed from the elements of the food within the organism.

Instead, however, of regarding sugar as being the constituent of the food which undergoes the change necessary to the production of adipose matter, he concludes that it is derived from starch. He gives the empirical formula of starch, and also that of fat; and shows that the conversion of the former into the latter may be effected by the separation from the starch of a certain number of equivalents of oxygen. There is but one way according to this author in which the formation of fat in the animal body is possible; and "this is absolutely the same in which its formation takes place in plants; it is a separation of oxygen from the elements of the food."

Whatever opinions may be entertained in regard to the views advanced by either of the distinguished authors to whom we have alluded, it is very certain that vegetables possess, in common with animals, the power of producing or forming fat; and in some instances of a character identical with that which is found in animals; thus the cocoa nut contains beef and mutton fat; there are certain seeds which contain horse fat and train oil; butter is found in palm oil; and human fat is found in olive oil. It is also very certain that those substances which are best calculated to promote the adipose exhalation are such as contain within themselves large quantities of fat or oil. We know also, that there is more or less of starch or sugar in all the articles relied upon in the fattening of domestic animals; and it is altogether probable that both these substances undergo transformations in the animal economy which result in the production of fat.

Having now adverted to some of the principal circumstances favorable to the exhalation of fat, the different parts of the system in which it is found, and the views of organic chemists concerning its most probable sources, we shall, in the next place, proceed to a brief review of the means available in preventing it, or in removing it after it is formed. After what has been previously stated in relation to the circumstances favoring its secretion, the conclusion cannot be resisted, that the presence or continuance of these circumstances would foil any efforts that might be made through the instru-

mentality of the food to prevent its accumulation. Instead, therefore, of indolence, quietude, and the absence of all sources of excitement, exercise of both mind and body should be rigorously instituted. Of the kinds of food best adapted to remedy a fatty diathesis, or prevent the secretion of fat, we can speak only in terms of questionable accuracy. By Boussingault, Dumas, and Payen, in concert, some experiments were undertaken that seem to throw some light upon the subject. The design of these experiments was to ascertain the quantity of fat contained in a number of the articles commonly used as food. The following are the numerical quantities of matter soluble in ether (fatty matter) in one hundred parts:

"Common Maize,	8·8	Harricots,	3·0.
Oats,	5 5	Peas,	2·0.
Rye flour,	3·5	Rice,	0·8.
Wheaten flour,	2·1	Potatoes,	0·08.
Beans,	2·0	Carrots,	0·17."

Whether now we regard the fat of the body as previously existing in the food, or as the result of transformations within the organism, it is very certain that those articles, viz., maize, oats, rye, &c., which according to the above table contain the greatest amount of matter soluble in ether, are acknowledged by all observers in rural economy to be the best calculated to promote the absorption of fat in the system; and it is equally certain that rice, potatoes, carrots, turnips, &c., possess very limited powers in this respect. All who have experimented with them admit, that they answer admirably for keeping animals in good condition, but are not adequate to fatten them. From such facts it is obvious that in selecting articles of food for the purpose of lessening the secretion of fat, the latter class of articles should be preferred. Rice, potatoes, carrots, &c., will evidently do more in this way than the other class of substances to which we have alluded.

Another view may be taken of this matter that also renders it plausible. Supposing fat to be formed within the organism, there is required for this purpose, in the food, a large quantity of carbon; for human fat contains about 79 per cent. of carbon. Now rice, potatoes, and carrots, are made up principally of starch and sugar, the former containing 44, the latter 39 per cent. of carbon; whereas maize, oat-meal, wheaten-flour, beans, &c., contain, in addition to what they have in their starch and sugar, large quantities of carbon in the oleaginous matter with which they are charged. The oleaginous matter of this class of articles is so rich in carbon as to approach nearly to the formula of human fat. It is obvious, therefore, that it is not material whether we regard the fat as pre-existing in the food, or as formed within the body, those substances to which we have alluded containing it in greatest abundance, would be most likely to favor its accumulation in the system; and as a consequence, in the treatment of obesity, should be avoided; and those articles substituted in their place against which such objections cannot be urged. The muscular parts of animal matter, it is believed, do not exercise much if any agency in the support of the adipose secretion.

We have already in this paper alluded to the fact that inferior animals fed exclusively on lean flesh did not grow fat. Instances too are exceedingly rare among nations and tribes subsisting almost exclusively on the flesh of wild animals, that contain in general little or no fat, of individuals in which this secretion exists in anything like great abundance. The aborigines of our country living almost exclusively on game are, as far as we have observed, quite lean. Obesity is not by any means as common among them as among the whites. The reasons for this, to some extent, may be sought for in the fact that muscular flesh has a composition identical with that of blood, as has elsewhere been shown, consisting of albumen and fibrin, organic elements that, it is probable, undergo in the organism little or no change, except what relates to their form. Besides the proportion of carbon in these ele-

ments, the principal constituent of fat, falls much below that of many other aliments animal or vegetable. It is hence a pretty safe conclusion, that muscular flesh is more concerned in building up those tissues of the system with which it is most intimately allied in chemical composition, than in the process of forming fat.

From the facts and experiments to which we have referred, it is obvious that much may be done by a right selection of diet to prevent or remedy many of the inconveniences caused by abnormal accumulations of fat. As yet, however, we are but on the threshold of this whole subject; the pathology and treatment are yet in their infancy, and much research is still necessary to enable us to understand many things which are now in the dominions of doubt.

The proper Diet in Dyspepsia.—This is one of the diseases the pathology of which, from its Protean character, is but imperfectly understood. Some regard it as atony of the stomach, and prescribe for it stimulants, astringents, and tonics; others make all the trouble to consist in constipation, and treat it with purgatives; others call it hypochondriasis, and administer various anti-dyspeptic medicines; the school of Abernethy look upon it as a secondary affection growing out of disease of the liver, and prescribe the black draught and blue pill; Broussais thinks all the distress due to chronic gastro-enteritis; Andral discusses all the alterations under the heads of lesions of circulation, nutrition and secretion. All of the phenomena to which we have alluded have been, without doubt, observed in connexion with what we generally call dyspepsia. Still it is doubtful whether any of the theories alluded to are in all respects correct. The malady, as all experience proves, may aaise from some inappreciable lesion of the function of innervation, unattended with any structural lesions whatever.

In his *Clinique Medicale*, Andral gives the case of a woman who entered the Pitié, and was treated for chronic gastritis; but on a *post-mortem* examination no appreciable alteration

in the stomach or any other organ was found. Again, this author tells us, that in cases where the anatomical characters are widely different, as for example, in chronic gastritis and cancer of the stomach, there are no symptoms by which the one can be distinguished from the other.

Taking into consideration the difficulty connected with a division of this subject, either as respects its pathology or symptoms, Abercrombie has hit upon one, which, for practical purposes, is about as good as any that have been proposed. He speaks of the complaint as occurring under four different forms. The first is that in which the distress takes place sometimes when the stomach is empty, at other times when it is partially full. The uneasiness attending it is of a painful character, accompanied by eructations, that in passing up the œsophagus make an acid burning impression on this organ, and also in the mouth. This is what is usually called heart-burn or cardialgia. A second form of the complaint is where there is a kind of gnawing or neuralgic pain coming on at intervals, or in violent paroxysms, accompanied with a sensation of distension, great anxiety, and extreme restlessness. In females there are often hysterical symptoms associated with the phenomena mentioned, such as the extrication of great quantities of air, palpitation of the heart, &c. *Gastrodynia* is the name given to this group of symptoms. The third form differs essentially from either of those described. It is where the pain and uneasiness commences immediately after taking food, and continues during the whole process of digestion. In most cases there is constant thirst; constipation of the bowels; a keen appetite, or perhaps anorexia; undue sensibility of the mucous membrane of the stomach, so that the ingesta produce the sensation of a foreign body in the organ. The presence of such phenomena are thought to indicate the existence of chronic inflammation. The fourth and last species of the complaint, and altogether the most difficult to manage, is where the trouble does not begin until from two to four hours after eating, and continues for several hours afterwards. Frequently, in addition to

many of the symptoms common to the other forms, there is pain or tenderness in the right hypochondrium, and as a consequence the liver is judged to be in fault; constipation, hypochondriasis, and other equally grave symptoms are also usually present. This form is what some late writers call *gastro-duodenal* dyspepsia.

To the above we might add that modification and uneasiness of the *primæ viæ* of which the distinguishing characteristic is the eructation of a watery liquid, transparent and insipid, to which Cullen gives the name of pyrosis, or waterbrash; and also that tendency seen in some stomachs to convert every kind of ingesta into acids, a striking instance of which we have been acquainted with for the last twelve years.

By some writer, perhaps Mackintosh, it is affirmed, that no physician is competent to treat a case of dyspepsia who has not experienced the disease himself. Whether this remark be true or false, it certainly contains an admission, that in order to treat the disease successfully, it requires the most consummate skill and experience. This arises in part from the fact, that while attempting to cure a patient we are compelled in many instances, in order to prevent starvation, to allow as food, that which operates as an exciting cause of the malady.

Probably in the treatment of no disease is it more necessary to ferret out what has given rise to the malady, than in the one under consideration. Out of the use of food, as is well known, this affection, in our country, more frequently arises than from all other causes combined. As a matter of course, this proceeds, either directly or indirectly, from errors respecting its quantity, its quality, the mode of taking it, or all these united.

A proper regulation of the quantity of the food, in all forms of the disease, is of superlative importance. Too much food at a meal produces over-distention of the stomach, weakness of its contrile powers, an attenuated condition of its parietes; and, if persevered in, converts the organ into a

lifeless bag, attended with all the concomitant evils of atony. Under such circumstances almost every thing necessary to be done relates to the ingesta. The food should be diminished in quantity, not suddenly, for this would probably aggravate the malady, but by degrees. If put upon the proper amount without giving the stomach time to accommodate itself to its contents, phenomena of a grave character might be the result. In a case that came under our observation sometime since, the habit had been to indulge in large quantities of food. On one occasion after a paroxysm of indigestion, the patient concluded to adopt the plan of 'starving out' the complaint by using very small quantities of the most bland and nutritious articles. Very soon the stomach became painful, and equally so when it was empty and when it contained food; a thirst for cold drinks came on, so annoying that it kept the patient in continual distress; tenderness in the epigastrium followed, and finally he had all the symptoms esteemed indicative of the existence of chronic inflammation. Having abandoned the reduced mode of living, the patient was put on such articles as were found to agree best with the stomach; and this course being persevered in for a while recovery followed. Impoverished living, using food in quantities too small to answer the purposes of nutrition, gives rise, among other bad consequences, to trouble in the organs of assimilation. Like the other organs of the body, the stomach in order to be healthy must be furnished with the materials upon which it can take exercise. Nearly all the gastric distress experienced by the lower classes of densely populated countries, is due to the want of healthy nourishment. The indication here is to increase the quantity of food to the natural standard, and the trouble is at once banished.

Of not less importance than the quantity of food is its quality. Too long a continuance on any one article, or class of articles, frequently occasions mischief. We have pyrosis among the peasantry of Ireland and Scotland, arising, as is supposed, from the too exclusive use of farinaceous diet.

Travelers tell us that it is also common in Lapland, probably depending upon a similar cause. Simply a change of articles, the use of a greater variety, is all that is here required. Cardialgia, or a confirmed tendency in the stomach to convert everything into acids, requires not only the avoidance of acids, but also of all substances readily convertible into acids. Diet that operates on antipathic principles must be instituted. Unfermented bread, vegetables containing no excess of acids, animal food of the more digestible kinds, should constitute the principal nourishment. In several forms of dyspepsia, as for example, in chronic inflammation of the stomach, the nitrogenized articles of diet, on account of their stimulating character, do not answer so well as the farinaceous, such as sago, arrow-root, potato gruel, &c. The gastro-duodenal form is, perhaps, oftener than the others, associted with great emaciation, a total loss of balance between the functions of supply and waste. The stomach in this condition, as a general rule, will bear but a small quantity of food. This, however, should contain a good proportion of the elements necessary to make blood, in order to keep the patient from running into fatal marasmus. Animal substances, eggs suitably prepared, whey, and some of the more nutritious vegetables will be found to answer the best purpose in fulfilling the indication. In some forms of the complaint the mechanical qualities of the food should not be disregarded. Mucilaginous articles, or those of a bland unirritating character, other things being equal, will suit best in chronic inflammation, or where there is undue sensibility of stomach; while for the atony and constipation associated with other forms, the white mustard seed, formerly so fashionable, or brown bread, by acting on the mucous membranes in a mechanical manner, may answer a good purpose in promoting regular egesta.

No case of dyspepsia, however, can be treated with much success, unless, in conjunction with a due regard to quantity and quality, there is also some attention paid to the mode of

taking food. The stomach, like the other organs, requires rest occasionally from its labors. Hence the practice of keeping it at work all the time upon articles not objectionable, as it regards either quantity or quality, is not only contrary to correct views of physiology, but absolutely productive of much mischief. Indispensably necessary is it that a reasonable length of time should intervene between taking meals. In cases where the stomach can bear but little food without pain or inconvenience, the time should of course be less than where something like the usual quantity can be sustained. System here, however, is of great importance, if, which in many cases is a desideratum, we would have the stomach to elaborate in a given time the means necessary to keep the patient from sinking below the point from which recovery cannot take place.

The *form* of the diet, in all the modifications of the complaint, is a circumstance of some moment. As a general rule fluid or semi-fluid articles, from the fact that they dilute the gastric juice, are less readily digested than substances of a solid form. Very few dyspeptics digest soup or broth well, whether prepared from animal or vegetable matters. Yet, notwithstanding the truth of this proposition as a general rule, when there is much irritation present in the different organs, fluids are more eligible than the solid aliments.

In concluding what we have to say on the treatment of this, the most troublesome of all curable diseases, we may state:—

1. That there are no constant characters, anatomical or functional, that will serve as a basis upon which, in all cases, to found a rational plan of treatment.

2. The appreciable lesions, when the result of errors of diet, or of other agencies, are less amenable to drugs than to an enlightened system of hygiene.

3. That the principal rules relating to a proper regimen must take into consideration the quantity of food, its qualities, nutritive, chemical, and mechanical, and manner of taking it.

4. The stomach undergoes some alterations for the relief of which the most that can be done, is to adopt the empirical plan of treatment.

The Diet in Diabetes Mellitus.—In this complaint, diet assumes a degree of importance which can never be disregarded by the physician without becoming obnoxious to the just charge of neglecting what is necessary to the welfare of his patient. Upon its right selection and proper regulation almost everything in the correct treatment of the malady depends. A brief statement of some of the peculiarities which characterise this singular, and, fortunately for mankind, unfrequent complaint, will perhaps be necessary before discussing the relations of its treatment to dietetics.

Passing over much connected with its origin, and the insiduous manner in which it steals possession of the system, we find the patient, among other things, complaining of passing too much urine. Instead of from two to four pints daily, there are passed, perhaps. that many quarts or gallons. Recently we had a patient under our care who, during one period of his disease, passed daily from two to three gallons. The urine has a peculiar indescribable odor, is of a more or less sweetish taste, has generally an unnatural transparency, and in consequence of the sugar contained in it, it is heavier than healthy urine. Distilled water being represented by 1000, Prout places the specific gravity of healthy urine at from 1015 to 1025; and that of diabetic urine at from 1020 to 1050. The urine of the patient to whom we alluded tasted nearly as sweet as the water of the sugar maple. As might be supposed, these alterations are connected with a dry skin, and an ungovernable thirst. With respect to the anatomical characters, nothing has been observed upon which entire confidence can be placed. Andral thinks the kidneys in most cases are in a state of hypertrophy; and Watson tells us that he has always found them very vascular. Both these changes, nevertheless, are likely to be results consequent upon the immense amount of labor the kidneys have

to perform. Compelled to secrete urine in twice or thrice the quantities of the healthy state, it would be reasonable to suppose that the substance of the organs proper, as well as their vessels, would become greatly enlarged. Notwithstanding there are no local structural changes adequate to account for the singular phenomena present in this affection, there are in every case very prominent alterations of the general system; such as a continual loss of flesh and fat, a species of marasmus that reduces the patient sooner or later to the condition of a skeleton. In the case, already mentioned, the patient in 55 days lost in weight 160 ounces; yet, notwithstanding this, the appetite during the time was good; and the amount of food consumed was more than what was sufficient for all the purposes of health. The functional lesions are very conspicuous. Most strikingly these are seen in the digestive organs. The stomach is at fault; for instead of converting the food into healthy chyme it manufactures great portions of it into sugar. Dr. Maitland found sugar in the stomach of a diabetic patient who had been living for three days previously to his examination exclusively on roasted beef; and Dr. McGregor has recently traced the existence of sugar in the blood. Such facts conclusively show that the primary trouble, instead of having its seat in the kidneys, as was formerly supposed, is due entirely to disordered digestion, to some unknown condition of the stomach, which not only renders it unable to assimilate the sugar ordinarily contained in the food, but compels it to manufacture sugar out of food that contains none.

Under the old plan of treatment it is doubtful whether a single case of the disease was ever cured. Some *apparent* cures, we are aware, have been reported, but even these are exceedingly rare. No individual of former days, however well skilled in his profession, counted any more on his ability to cure a confirmed case of diabetes, than one of genuine phthisis pulmonalis. A very prominent cause of this want of success is to be found in the fact that most of the older au-

thors regarded the affection as being intimately connected with disease of the kidneys, and to these organs, as a consequence, the most of their curative measures were addressed. As soon, however, as a change of opinion took place respecting the pathology, and the disease came to be regarded as being connected with an altered condition of the function of digestion, the indications were differently regarded. They were made to consist in restoring disordered digestion; first, by the avoidance of all kinds of food containing sugar, and secondly, by not using those kinds of food readily convertible into sugar; and, thirdly, by correcting as far as possible the diseased condition of the stomach.

Among the first who came forward with any reasonable means of fulfilling any of these indications was Rollo. He insisted upon their practicability, by compelling the patient to live exclusively on animal food; and published a number of cases in which the efficacy of his plan seemed to be fairly tested. This mode of treatment has been pretty generally adopted. But owing to the great repugnance which patients contract to the regimen, and the difficulty of keeping them upon it, practitioners have been pretty generally compelled to relax the rigor of Rollo's rules, and allow their patients occasionally to use the mixed diet. Notwithstanding this, patients fared much better than under the old plan of treatment. Seeing what was still necessary to make out a regimen, such as the complaint required, and such as would be more compatible with the feelings of the patient, it occurred to Bouchardat, that a modified bread which should consist chiefly of *gluten*, would meet the demands of the case. The *Societe d'Encouragement* had granted a prize to M. E. Martin for having isolated gluten during the preparation of starch; and he therefore applied to this eminent manufacturer to see if he could not manufacture gluten bread—bread made almost exclusively of gluten. M. Martin, after experimenting for sometime, succeeded in making a very good article of bread by adding one-fifth of starch in order to make it light

and of an agreeable taste. This achieved, Bouchardat put his diabetic patients on animal food and *gluten bread;* and the result was highly favorable. All who have tried the plan acknowledge it a great improvement. Gluten bread of tolerable purity is readily prepared by washing the dough of wheaten flour thoroughly in water before it is baked.

It is obvious to all who have had any experience in this affection, that in order to be successful with the above plan of treatment, sugar must be rigidly prohibited. So also should be all those alimentary substances containing organic elements that are easily changed into sugar. On this account, substances containing starch, vegetable mucilages and gums, should be avoided. We see the facility with which starch is converted into sugar in germination, malting, and the ripening of fruits. There is nothing necessary to the change but the addition of the elements of water. Gum, chemists inform us, has the same composition in a hundred parts as cane sugar. It is true that it differs from that substance in its chemical habitudes; still, the fact that it is identical in composition with one variety of sugar is a sufficient reason why it, as well as the compounds so closely allied to it, should be proscribed from the food of a diabetic patient.

With regard to the quantity of the food, patients laboring under the malady have to be restricted. Associated with the other troublesome symptoms, as has elsewhere been remarked, there is a strong, craving appetite, the gratification of which, with even the proper kinds of food, seldom fails to produce gastric distress, and consequent aggravation of some of the worst symptoms of the complaint. Finally, the quantity of the food should correspond with the ability of the stomach to digest it; and all possible care should be taken by attention to this, and other things, to repair the deranged condition of the digestive apparatus.

[TO BE CONTINUED.]

Art. II.—*Remarks on Cataract; with a Case.* By William M. Boling, M.D., of Montgomery, Alabama.

The propriety of operating for cataract on the eye first affected, the other eye as yet remaining sound, has been a mooted question. The weight of the authority, in times past, has been decidedly against such a proceeding; recently it has been more equally balanced, and perhaps at the present time inclines somewhat in its favor.

The arguments against an early operation have been principally founded on facts or assertions like the following:—First, that one eye is amply sufficient for usual vision; consequently the patient's condition is not improved by the operation, and he therefore undergoes the pain, and incurs the risk, without an adequate object. Second, that double vision and confusion in the appearance of objects arise from the difference in the foci of the two eyes, caused by the removal of the lens from one only.

It is strange that such objections should be allowed to have such weight, and it is surprising to see the latter especially, which may be so easily removed by properly adapted convex glasses, assigned by learned authors.

In regard to the former; although a very useful degree of vision may be enjoyed with one eye only, he is "*rara avis in terris*" indeed, who could think, after a successful operation which had restored to him the use of the other, that his condition was not improved, and that he had "incurred a risk without an object."

The principal ground on which an early operation is urged is, that it will probably prevent the formation of a cataract in the other eye. In support of this, cases are recorded by the best authorities, in which the spontaneous removal of an incipient opacity of the crystalline lens has taken place, on the removal of a cataract from the other eye. This is accounted for by the peculiar and intimate sympathy existing

between the eyes, by which the sound one frequently takes on diseased action similar to that existing in the one first affected. Wardrop makes mention of a peculiar inflammatory affection which takes place in the eye of horses, producing disorganization of the internal structure, and states the fact, that its progress in the eye last affected is arrested by its removal from the one primarily diseased. In this country, the practice is not uncommon with farmers, under like circumstances, to remove the disorganized eye when the other becomes 'weak.'

It may be enquired, however, whether the predisposition to cataract manifested by its formation in the first eye, and the continuation of other causes which may have led to it, are not in many instances the cause also of its development in the second? This is a natural inquiry, and facts in all probability give it a positive answer. Under such circumstances, the removal of the first cataract would exert no control over the existing predisposition, and would probably not prevent, ultimately, the development of a second; still as some of the causes leading to such a result would thereby be removed, its progress, we may suppose, would be less rapid.

Even where no peculiar predisposition to cataract might be thought to exist, and without the intervention of this intimate sympathy between the eyes, the mere occurrence of blindness of one eye, from any other cause whatever, by throwing the labor of vision entirely on the other, entailing thus upon it a double amount of duty, may probably in some cases lead to the development of cataract in it. Supposing this to be true, it may also be urged, among other reasons, for the early removal of cataract existing in one eye only. The following case is one in which cataract was probably caused by the increased exertion of the organ, rendered necessary by the previous loss of vision in the other. There is no reason to suppose that any predisposition to cataract existed, or it would have been produced by the violence sus-

tained by the eye first affected; while the agency of sympathy between the eyes in its production is rendered improbable, by the dissimilarity in the character of the affections of the two organs.

Case.—Nat. Newman, mulatto, aged 89 years, received twenty years ago a blow in his right eye with an ear of corn. Pain and inflammation followed, which in a short time were removed; but at the end of three years from the time of receiving the injury, the eye was entirely blind. Shortly after the entire loss of vision in the right eye, the sight of the left began to fail, and in two years more was also entirely lost. On the 20th of August last his eyes presented the following appearance. The pupil of the right eye was clear, of natural size, but almost entirely immovable. The amaurosis was complete; with this eye he had not the slightest perception of light. Of the left eye, the lens was opaque, the cataract being of a perfectly white color. With this eye he had a slight perception of light—sufficient, when in a dark room, on a bright day, with one window open, to enable him to discover its position. The conjunctiva of the eyes were somewhat inflamed, and the tarsi considerably so, and also thickened. By the removal of a few inverted cilia, which seemed to be measurably the cause of the conjunctival disease, and the use, night and morning, of mercurial ointment, with creosote, and one or two applications of nitrate of silver, this condition was in a great measure removed.

On the 4th of September I couched the cataract of the left eye, and his vision immediately after was such, that he could distinguish faces, and without difficulty could tell any number of fingers held up before him.

The ultimate termination of the case was unfortunate. The childish delight he felt in consequence of the restoration of the long lost function, caused him to exert and expose the organ more than was prudent; nor were admonitions to a contrary course availing. A high degree of inflammation

was thus excited, which his age prevented me from treating with the activity necessary for its removal. Secondary cataract and eventually almost entire disorganization of the eye followed.

March, 1846.

ART. III.—*Medical and Obstetrical Cases.* By FRANCIS H. GORDON, M.D., late President of Clinton College, Tennessee.

Retained Placenta.—May 31st, 1844, I was called in haste to see Mrs. L., æt. 30 years, who had aborted twenty-four hours previously, being about three months and a half advanced. Two very old ladies, long practiced in midwifery, informed me that the difficulty was some unnatural growth in the womb. Upon examination, I pronounced it to be the placenta attached to the walls of the uterus; but the old women could not be convinced till I pinched off a portion and exhibited it to them. There was considerable peritoneal tenderness, the womb was not inclined to paroxysmal action, but quite sore, with its cervix dilated so as to admit the fingers with difficulty. Pulse feeble, and 110 per minute.—Gave stimulants to no advantage. Ergot, ʒss was administered every half hour, till three does were taken, without inducing uterine action. Tried artificial irritation, and external friction and pressure; but all was of no avail. Conceiving it impossible to extract the placenta by any plan that was safe to the woman, I determined to leave the matter to nature, unless future circumstances should demand interference. Directed one alvine evacuation to be procured daily with castor oil; a fourth of a grain of acetate of morphia to be given whenever she was restless; warm water to be freely thrown up the vagina every day; and a stream of warm water to be directed for three hours every day upon the abdomen, and to be followed by poultices of warm wheat bran, large enough to cover the whole surface.

No marked paroxysmal contraction ever took place, but the placenta gradually came away in a dissolved state, almost unconsciously to the patient; and her health gradually improved for about two months, when recovery was complete. She has since been delivered, at full term, of a healthy child.

Tetanus from sudden arrest of the Catamenia.—November 3d, 1843, I was called in the night to Miss V., æt. 16 years, of vigorous constitution. Two days before she had been caught in a shower of rain during the menstrual flow, which caused a sudden cessation of the secretion. On the 3d, at about 4 o'clock, P.M., she was suddenly seized with pain in the epigastrium, and tetanic spasms. I found her supine, every muscle rigid, and resting upon the occiput and heels, the trunk forming an arch between these extremities; her pulse nearly natural. The teeth continued so firmly clenched, that internal remedies were out of the question. I heated an iron poker, and the handle of a frying pan to a red heat, and using them alternately managed thus to keep a hot iron passing along the tract of the spine, within an inch of the skin, for about five minutes, when general relaxation suddenly ensued. The skin did not blister from the hot irons, though several spectators thought it must be literally roasted.

I treated the case with opium, sulph. ether, carb. ammonia, calomel and ipecac. The paroxysms, of about one hour's duration, returned at irregular intervals five or six times a day until the 12th, when the patient was left free from pain, soreness, or disease of any kind, being at once apparently in perfect health.

I should have remarked, that a blister was drawn with cantharides along the cervical and three or four dorsal vertebræ. One singular feature of this case was, that during the interval of relaxation the young woman displayed all the symptoms of nymphomania, and would not take a single dose of medicine unless it was given her by a young gentleman;

evincing passionate fondness for any young man in five minutes who might chance to enter her room.

On the 13th I dismissed her cured, and directed warm teas, pediluvia, &c., to be used at several successive menstrual periods, so as to induce a regular return of the uterine secretion. The plan was successful as long as followed; but it was neglected at the fourth period, and I was summoned to see her on the 6th of March, 1844, in precisely the same condition as in November. Bled her 30 ounces; she vomited and was generally relaxed. Directed 6 grains of calomel and 2 grains of Dover's powder to be given every four hours until three doses were taken, to be followed by castor oil, and a blister to the nape of the neck. The spasms returned at irregular intervals till the 9th, when there was complete recovery. By being careful to promote menstruation at each regular period, the lady remained apparently healthy until the 22d of September, 1844, when I saw her laboring under an attack of autumnal fever. For two or three days she had spasms as in the other two attacks. A blister to the nape of the neck, and the usual treatment of fever, relieved her in a week, and her health has been excellent up to this time.

Traumatic Neuralgia.—Mrs. P. æt. 40 years, being far advanced in utero-gestation, was bled, June, 1843, in the foot, by a neighbor, and in the operation a branch of the external tarsal nerve was wounded.

August 17th. I was requested to visit her, and on doing so found her laboring under symptoms of hysteria; such as anxiety, flushed countenance, dyspnœa, and vertigo, with prominent eyes and vacant stare. The foot was swollen, and a little painful. Firm pressure along the course of the nerve gave relief, but a slight titillation caused intense pain. By this mode of procedure the wounded nerve could be traced to the sacrum. The patient also suffered from bronchocele, the tumor being so large as to obstruct the cerebral circulation. Friction along the vertebral column gave in-

stant relief to the most distressing symptoms. Prescribed morphia and blue mass. Under the influence of these remedies she enjoyed partial comfort till the first of October, when she was delivered of a healthy child. Meantime iodine had been employed so as considerably to reduce the bronchocele. After delivery she suffered extremely, and in four weeks lost in weight more than seventy pounds. The pains were periodical, returning every evening with fever, and passing off towards morning with copious perspiration. The foot and entire limb were slightly swollen, and the whole length of the vertebral column was intolerant of heat or pressure. She slept but little, was anxious, restless, without appetite, and emaciating rapidly. Under these circumstances a caustic issue was established in the old cicatrix where the nerve had been wounded; the whole limb was bandaged, pustules from ointment of tartar emetic were kept up along the spine; half a grain of acetate of morphia was given whenever the patient was restless, or in much pain; two grains of sulphate of quinine were directed every two hours, from daylight till noon daily; and her bowels to be kept open with aloetic pills, alternated with blue mass and ipecacuan, *pro re nata.* Under this plan, the woman gradually improved; the pains almost ceased; her appetite returned; some increase of flesh was manifest; she slept well, and, in fine, considered herself rapidly convalescent.

Feb. 9th, 1844. She was attacked with typhoid fever, which brought back all the former symptoms with aggravated violence. One singular symtom now showed itself, surpassing anything I ever saw: the heart, as if hypertrophied, took on the most violent action, so as visibly to shake the patient all over, and to communicate a constant tremulous motion to her couch. It never ceased a moment while the patient lived. My excellent friend, Dr. Gowen, who attended the case with me in consultation, well described the phenomenon as "*a thundering of the heart.*" No treatment from this time afforded more than partial relief; and death occur-

red on the 26th, seventeen days after the supervention of fever.

Lunar Caustic in Burns.—During the autumn of 1840, while the writer was performing a set of experiments in chemistry before a class, a burn was accidentally received in the following manner. In getting out some phosphorus to light a spirit lamp, a little of it dropped into a box of mineral specimens under the table. Being unable to find it readily it was left in the box and forgotten until it got into a blaze. To save the minerals from injury, I attempted to run my left hand under them and the phosphorus and throw all out together; but instead of this, I ran the index and middle finger directly into the blazing phosphorus. The piece, about an inch long, stuck to my fingers, and before I could plunge them into the pneumatic trough, it completely roasted them from their extremities to the second joints. The pain exceeded in intensity any thing that ever I suffered.

But silver and its compounds being the subject of the lecture, there was fortunately a solution of the nitrate on the table, and as soon as reflection returned I plunged my fingers into the caustic liquid. Relief was prompt, and so great that in a few minutes the lecture was resumed. It was then about 3 o'clock, P.M.; there was slight pain in the fingers till 9, when I fell asleep and suffered no more from it afterwards. Hard crusts of sphacelus shielded the diseased parts till they were thrown off by reproduced flesh beneath. My fingers are now as perfect as ever in shape and motion, and no one could discover a cicatrix.

Clinton College, March, 1846.

Art. IV.—*A Case of Alarming Hemorrhage from the Bowels in a little girl, caused by the detachment of a Polypus.* By Dr. M. H. Fee, of Leatherwood, Indiana.

On the 13th of last September, I was hastily summoned to visit C. M., daughter of C. A. B., æt. 10 years. On my arrival I learned of Mrs. B. that an hour before, the little girl had a bloody discharge from her bowels amounting, according to her estimate, to something more than a quart. There was also discharged at the same time, what I considered, from description, to be a polypus, said by the parents to be somewhat larger than a partridge egg, of oval form, studded over the outer surface with hemispherical prominences, filled with a sero-purulent fluid, the peduncle being about the size of a large goose quill. It was left on the ground where it was examined, and before my visit had been swallowed by the poultry. I found the little patient much prostrated, with pulse scarcely perceptible, cold extremities, a sense of stricture at the præcordia, and distressing nausea. I directed warmth to be applied to the feet, while I prepared and administered the following mixture: tinct. opii gtt. 20, spts. ammon. gtt. 10, acet. plumb. gr. 1½.

In a short time after the administration of the draught, there was decided relief of the præcordial distress, as well as of the nausea, and the coldness of the extremities; and in about half an hour she had another bloody discharge, entirely different from the former; this being mostly clots of grumous blood while in the former, the blood was perfectly liquid. The last discharge amounted to about three gills. In an hour and a half after the administration of the draught, I repeated the remedy in half the dose.

Returning a few hours afterwards, I found my patient suffering with acute pain in the head which was aggravated by the least jar or noise, her face flushed, and eyes injected. At first sight I feared lest I had carried stimulation too far; after feeling the pulse, I became satisfied that this was not the case, but that the symptoms arose from loss of blood. In ac-

cordance with this view of the case I mixed twenty drops of the spirits of ammonia, with four tablespoonfuls of water, and gave a tablespoonful of the mixture, every fifteen minutes until three doses were given; when her head became easy, and she fell into a gentle slumber. I left some laudanum and acetate of lead to be given in case the hemorrhage should return.

Sept. 14th. Found my patient laboring under some excitement, and headache, from a chill which she had at nine o'clock this morning. The fever was soon reduced by spts. nitre; and her head relieved by cold applications. Ordered castor oil ℥ss., oil of turpentine 15gtt., to be taken immediately. Had had one small grumous discharge during the night.—Discontinued the saturnine preparation, and the opiates.

Sept. 15th. Found my patient in a strong rigor. It was now clear that this was a regular intermittent of the quotidian type. Ordered a solution of 16grs. of quinine in two ounces of water, of which two teaspoonfuls to be taken every two hours, after the decline of the slight febrile excitement; also castor oil ℥ss., and oil of turpentine 20gtt., to be taken this afternoon. The oil and turpentine of yesterday had produced two alvine dejections, feculent, and free from every trace of blood.

16th. Found my patient greatly improved; no chill; two feculent discharges; had been up, and walked from the bed to the fire-place, without assistance. Ordered quinine to be continued in small doses, hourly, for a few days, with wine, and generous diet; bowels to be moved by castor oil and spirits turpentine in the afternoon.

17th. This morning made my last visit to my patient; found her sitting up; fast improving in appearance and strength. From this time, her convalescence was rapid.

This little girl had been, for several years, of a sickly appearance, sallow complexion, with constant præcordial distress, and weak digestive powers. She was thought to be troubled with worms.

I had been frequently called to see her, and had invariably

prescribed for the verminose symptoms, but without at any time effecting any considerable discharge of worms, the symptoms persisting, though with abated severity. She even became paralytic at times; and frequently quite unconscious, as if sitting up asleep, and in that posture showed no tendency to fall. In a word, the case exhibited, at times, all the characteristic marks of catalepsy. Suspecting that tape-worm might be the cause of the evil, I had taken steps to procure remedies for it when the discharge of blood, and of the polypus came on, and changed my diagnosis of the affection. It may still be a question whether this polypus, so inconsiderable in size, was capable of producing so much constitutional disturbance, and especially so serious a derangement of the nervous system. I am free however to say, that notwithstanding the apparent inadequacy of the cause, it was, to my mind, the sole cause of the complaint. In proof of the correctness of this opinion we have the fact, that the girl has regained her health perfectly since the polypus passed away, and is now free from all symptoms of disease.

February 24th, 1846.

Art. V.—*A Case of Purpura Hemorrhagica.* By W. D. Harris, M. D., of Utica, Mississippi.

The following case which occurred in my practice being of a somewhat novel character may not be uninteresting, I hope, to some of the numerous readers of the Journal.

October 9th, 1845. I was called to visit Miss M. S., aged 23 years, of small size, dark hair and complexion, health and constitution delicate from childhood, whom I had attended sixteen months previous for spinal irritation, together with a slight affection of the uterus, and considerable bronchial difficulty, with pain in the left side, &c.

When I arrived on this occasion, I found her laboring under the following symptoms: hemorrhage from the nose, somewhat profuse, of 30 hours duration—also from every part of the body, as well as the head, neck, and face; the blood oozed out through the pores of the skin, resembling mosquito bites, in some places in clusters thicker than others. Knowing her constitution to be delicate, I supposed that there must be some derangement of the catamenia; but on inquiry found that her health in that respect was as good as usual. Previous to my visit, she had been under the care of a talented quack for a pain in the side, with some debility of the lungs, for which she was using externally veratria ointment, and taking internally deutiodide of mercury, with iodide of potassium, up to the time when I made my first visit; I prescribed alum water to the nostrils and a plug saturated with the same to be inserted into the nose; wash for the body, dilute acid of vitriol; gave a blue pill and sulph. quinine sufficient to move the bowels; spirits of nitre and paregoric as a diuretic in teaspoonful doses every three hours, and Dover's powder sufficient to allay nervous excitability, and procure rest.

10th. Saw my patient at 9 A.M.; found her relieved from the hemorrhage of the skin, but from the left nostril blood still continued to flow freely. Medicine had moved the bowels; tongue clean; pulse 100. The dilute oil of vitriol had a beneficial effect on the skin, though attended in its application with some nervous excitement, which was allayed by Dover's powder.

As I looked on the hemorrhage as passive from the beginning, I prescribed dilute creosote to the nose with a plug; oak-bark and alum wash to the skin, and gave sulph. quinine in 3 grain doses alternarely with Dover's powder in 5 grain doses every four hours, and persesquinitrate of iron in 12 drops three times a day; kept the bowels open with mild cathartics.

11th. Found my patient still bleeding at the nose, though less profusely; pulse feeble, beating 110 per minute; skin

soft; patient had spent a restless night, attended with strong hysterical symptoms, and slight derangement of intellect at times. Continued the creosote to the nose, finding it to be the best among the many remedies that were tried. Ordered the alum hip-bath; continued the quinine and Dover's powder, and gave 10 drops of tinct. iodide of iron instead of the nitrate. Her mouth now was slightly touched with the mercury, either the blue pill, or the stronger preparations which she had been taking before my first visit.

12th. Saw her this morning in consultation with my friend, Dr. Bush; found her very much as on the day previous; continued the same treatment, adding the compound tinct. of catechu to be applied to the nose and given internally.

13th. Still bleeding at the nose, though much less profusely; continued the creosote, as it seemed to be the only application which was of any service; symptoms much the same as yesterday; hysteria still continues; treatment the same, only syrup morphine added to control the nervous irritability.

14th. This morning found my patient relieved from hemorrhage from the nose; pulse small and frequent; skin moist; extremities cool; exceedingly feeble and easily excited to crying or laughter; mouth sore, and cheeks swollen, notwithstanding the bowels have been opened every day with mild cathartics. This day the catamenia came on, and at times was somewhat profuse, producing the greatest alarm, but all persuasions of her mother or myself were unavailing to induce her to suffer any local application to be made.—Continued general treatment; added tinct. myrrh in drachm doses. She now began to improve slowly, and was furnished with such medicines from the shop as her condition required from time to time.

Dec. 3. Was called to my patient again; on arriving I found her laboring under uterine hemorrhage in the strict sense of the word. This of course produced much alarm. I explained the nature of the case, and assured her that there

was no danger, as it was of very frequent occurrence though not in unmarried women. It readily yielded to the usual treatment; since which time she has recovered her usual health and spirits.

I might mention in conclusion that this young lady belongs to one of the best families in the farming community, who never knew want, or participated in luxurious indulgences. I present the case as it occurred without comment. How far the powerful agents she was using had any share in producing the state of things above recited I shall not attempt to determine. The pathology of purpura is still involved in great obscurity. The multiplication of cases must ultimately clear it up. In that view, I trust the one which I have given may be found to be of some value.

March 10th, 1846.

REVIEWS.

ART. VI.—*Animal Chemistry with reference to the Physiology and Pathology of Man.* By J. FRANZ SIMON, Fellow of the Society for the advancement of Physiological Chemistry at Berlin, &c., &c.—Translated by THOMAS E. DAY, M.A. and L.M., Cantab., Licentiate of the Royal College of Physicians. To be complete in 2 parts. Part 1. Philadelphia; Lea & Blanchard. 1845. 12mo. pp. 292.

We closed our former article on this work with a table of the constituents of the blood as affected by pneumonia biliosa, in a case of which it was shown that the fibrin had risen to the extraordinary height of 12·72 in a thousand parts.

The author next gives the results obtained by Andral and Gavarret in their analysis of pleuritic blood. The increase in the fibrin was found by these chemists to be from 3, the healthy standard, to 4, 5·9, and 6, according to the stage of the disease, being greatest when the pleuritis was not yet advanced, but where effusion had taken place, and less in the more advanced periods of the affection. In five cases of pleuritis Becquerel and Rodier found the mean proportion of fibrin to be 6·1.

In peritonitis the increase in the fibrin was not observed by the author to be so great as in pleuritis, but still in that form of the complaint denominated puerperal fever he found that it amounted to twice as much as in healthy blood. Andral and Gavarret found it even as high as 6·1 and 7·2.

"In a woman, aged 24 years, attacked with metroperitonitis, Scherer observed a tolerably large buffy coat, apparent-

ly more gelatinous than tough. The clot was rather large, but not very firm. The serum was neutral.

The blood contained in 1000 parts:

Water,	814·53
Solid constituents,	185·47
Fibrin,	5·32
Albumen,	96·35
Blood-corpuscles,	70·16
Fat and extractive matters,	6·02
Salts,	7·13

Two days after the blood contained:

Water,	832·58
Solid constituents,	167·42
Fibrin,	4·02
Albumen,	100·25
Blood-corpuscles,	52·30
Salts and extractive matters,	11·42

The buffy coat had a more gelatinous appearance, and the serum was redder than on the former occasion. Death occurred two days after the second venesection."

The same increase of fibrin was noted in inflammation of the uropoietic viscera. In a case of cystitis the blood examined by Andral and Gavarret gave 5·4 of fibrin. Rheumatism develops this principle very sensibly, and the increase seems to bear some proportion to the intensity of the pain. Thus, says our author:

"The blood will be found to contain as large a proportion of fibrin at the commencement of a rheumatic attack which begins very severely, as at a much later period in a case commencing mildly, but in which acute pain gradually supervenes. This will be seen from the following analyses:

	Venesection.	Day of disease.	Water.	Fibrin.	Blood-corpuscles.	Residue of serum.
1st Case,	1	4	797·1	8·9	109·3	84·7
	2	5	796·9	9·8	107·5	81·8
	3	6	812·5	8·5	95·4	83·6
	4	10	820·6	6·4	93·5	79·5
	5	25	789·7	2·8	117·9	89·6

	Venesection.	Day of disease.	Water.	Fibrin.	Blood-corpuscles.	Residue of serum.
2d Case,	1	8	778·8	6·1	123·1	92·0
	2	9	780·9	7·2	120·7	91·2
	3	10	788·0	7·8	112·8	91·4
	4	13	799·0	10·2	101·0	89·8
	5	17	813·9	9·0	89·2	87·9
	6	28	826·2	7·0	83·8	83·0

"In the first case, the maximum of fibrin is found in the blood taken at the second venesection, and as early as the fifth day of the disease. In the second case, on the contrary, it did not occur until the fourth venesection, upon the thirteenth day of the disease, when nearly all the joints were reported to be in a swollen and painful state. These symptoms began to diminish after the next two bleedings; the fever, however, still continued."

In erysipelas the fibrin has been found in as large a proportion as 7·3, while in milder cases of the malady, attended with but little fever, it has amounted to only 3·6. The quantity seems to be determined rather by the severity than the extent of the affection, for in a case of erysipelas of the hand the blood yielded 7·71 of fibrin. In one of the face, it was only 5·45.

The blood of phthisical patients is inflammatory. The clot is small, consistent, and covered with a buffy coat; the serum is clear, and of a bright yellow color, during one period of the disease; but the blood differs considerably in the progressive stages of consumption. As the tubercles soften the quantity of fibrin increases to 4·5, in some instances; and when vomicæ form in the lungs may rise to 5·5, or even 5·9, but never attains the height observed in pneumonia. In the very last stage of the disease, as the blood becomes poor, the fibrin diminishes, and even falls below the healthy standard. As the changes in the blood attendant upon phthisis are particularly interesting we copy from the author the following tables and observations:

"I have made three analyses of the blood of phthisical persons, the results of which are not devoid of iuterest.

	Analysis 26.	Analysis 27.	Analysis 28.
Water, - - -	807·500	825·200	750·000
Solid residue, - -	192·500	174·800	250·000
Fibrin, - - -	4·600	6·500	a trace.
Fat, - - - -	2·350	4·200	3·750
Albumen, - - -	98·360	90·350	131·000
Globulin, - - -	71·230	61·110	94·500
Hæmatin, - - -	3·110	2·690	2·750
Extractive matters and salts,	9·350	8·000	15·250

"The blood in analysis 26 was taken from a man aged 36 years, in the second stage of tubercular phthisis, who afterwards sunk under the disease. The blood in analysis 27 was taken from a man aged 41, in the third stage of the disease, who suffered extremely from nocturnal colliquative sweats, and from feverish symptoms. In these two instances the blood exhibits the characters of hyperinosis, for the quantity of fibrin is in one instance twice, and in the other thrice the normal amount, and the amount of hæmato-globulin is below the healthy standard: moreover, the quantity of solid constituents is less than in healthy blood. Andral and Gavarret's observations respecting the changes that the blood undergoes as the disease advances are here borne out.

"The 28th analysis gives results quite at variance with the two former. The blood in this instance was taken from a man about 30 years of age, who was treated in our hospital for tubercular phthisis. He had taken cod-liver oil for sometime with much benefit; subsequently, however, frequent attacks of hemoptysis came on, for which venesection was always immediately prescribed. The clot in these cases was seldom very firm. I analysed the blood taken at his last venesection. It was received into a shallow vessel, and amounted to between six and seven ounces. It did not coagulate, and it presented the appearance of a homogeneous dark red fluid, in which some white gelatinous flocks of coagulated fibrin were swimming.

"The blood contained, much to my surprise, a larger amount of solid constituents than I have ever observed in any other analysis. The fat, when isolated, smelt strongly of the volatile fatty acid of the cod-liver oil, the odor of which was also strongly developed during the evaporation of the blood to dryness. A considerable quantity of hæmaphæin was present, and deeply colored the extractive matters and salts. It is very probable that the peculiar changes in the blood in this instance are due principally to the cod-liver oil and to the repeated bleedings."

The opposite state of the blood to the one we have been considering, is styled by Dr. Simon *hypinosis;* and this is exhibited in typhus, intermittent and continued fevers, variola, and varioloid, rubeola, and, according to our author, in scarlatina. This is more than we were prepared to expect. Assuredly in scarlatina we should have looked for an increase in the amount of fibrin; and in some of the analyses of Andral and Gavarret this was the case. In two they found it nearly normal in quantity, in one 4·0, and in one even as high as 5·8. But scarlet fever is a disease the character of which varies exceedingly in different constitutions, and during different epidemics. It is therefore difficult to assign to the blood in that complaint any specific condition. In one case it might exhibit even a deficiency of fibrin, while in most others the blood would show evident signs of inflammation. In typhus the fibrin is for the most part normal in quantity, very seldom, and then only slightly, above the mean, and often decidedly less than it is found in healthy blood. It fell as low as 1·6 in one case cited by Dr. Simon. In measles it varied from 2·4 to 3·4, being little altered from its natural state. In intermittent fever its maximum, in the cases investigated, was 3·8 and its minimum 3·0. The author thus sums up:

"The composition of the blood in hypinosis is essentially the reverse of that in hyperinosis. The amount of corpuscles is increased, that of fibrin is diminished, and the solid constituents generally are increased rather than diminished; while in the phlogoses they are most commonly below the normal standard. We have seen in the previous analyses that in proportion as the febrile symptoms assumed the form of erethismus, the characters of hypinosis became less marked; and, on the other hand, that when they took on a torpid type these characters were more strikingly developed."

The third form of diseased blood described by Dr. Simon he styles "*spanæmia*," the meaning of which is *poor blood*, the vital fluid being in that case especially deficient in fibrin and blood-corpuscles. Some of the diseases in which this condi-

tion is presented are cancer, scrofula, chlorosis, purpura hemorrhagica, and petechial typhus, all of which are characterized by anemia. It is the experience of the author, in which he supports Andral and Gavarret, that the solid constituents of the blood, and especially the globulin, are increased by ferruginous preparations. Confirmatory of this fact Dr. Simon gives the following tables, the first showing the constitution of the blood of a chlorotic girl when first subjected to treatment; the second exhibiting it at the end of seven weeks, during which time she had taken two ounces of the tincture of iron, and sixty-four grains of metallic iron.

	Analysis 32.	Healthy blood.
Water,	871·500	795·278
Solid constituents,	128·500	204·022
Fibrin,	2·080	2·104
Fat,	2·520	2·346
Albumen,	79·820	76·660
Globulin,	30·860	103·022
Hæmatin,	1·430	6·209
Extractive matters and salts,	11·000	12·012

The hæmato-globulin contained 4·4% of coloring matter.

	Analysis 33.
Water,	806·500
Solid residue,	193·500
Fibrin,	1·200
Fat,	2·299
Albumen,	81·230
Globulin,	90·810
Hæmatin,	4·598
Extractive matters and salts,	9·580

The hæmato-globulin contained 4·8% of coloring matter.

Purpura hemorrhagica, though placed in this connexion, does not appear to exhibit the characters of spanæmia, but shows, as will be seen by the following analysis, a great deficiency of fibrin.

Water, - - - - -	795·244
Solid constituents, - - -	204·756
Fibrin, - - - - -	0·905
Blood-corpuscles, - - -	121·701
Residue of serum, - - -	83·405

The fourth form of diseased blood our author calls *heterochymensis*, upon which he makes the following explanatory remarks:

"I arrange under this form all those states of the blood in which a substance is present that does not exist in the normal fluid: when, for instance, the blood contains urea (in appreciable quantity,) sugar, coloring matter of the bile, fat, pus. The circumstances that lead to the establishment of this diseased condition of the blood are far less natural than those which are connected with the production of the three former classes. The arrangement is artificial, and merely adopted for convenience, since this class of disease has simply this property in common, that the composition of the blood is here *qualitatively* changed, whilst in the three former it is only altered *quantitatively.* The putrid form of typhus, the yellow fever, and the plague, certainly might have been placed in the class, since coloring matter of the bile, and a salt of ammonia, are often found in the serum. I have, however, thought it best to place these diseases in the third class, because, in the first place, the presence of the abnormal constituents is not constant; and because, secondly, in consequence of the deficiency in the solid constituents of the blood in these disorders, they naturally occur under the class spanæmia."

In the *morbus Brightii* the result of numerous analyses indicates a decreased quantity of solid constituents, a small amount of blood-corpuscles, and the presence of *urea* in the blood. *Sugar* has been detected in the blood of diabetic patients; *bile* appears in some of the affections of the liver; and according to Gulliver, *pus* is "found in the blood in all diseases in which there is suppuration, or even inflammatory swelling, accompanied with hectic fever." But, worse than all, this fluid, it seems, is sometimes infested with *animals.* Our author informs us that

"Dr. Chiaje, of Naples, has recently stated that he found the polystoma sanguiculum in the expectorated blood of two phthisical patients who were attacked with hæmoptysis.—Some of these small flat worms, which are similar to leeches, were floating about in the serum, others attached themselves to the sides of the vessels."

The London Lancet, for 1840, gives similar cases. Dr. Goodfellow found an immense number of animalculæ in the blood of a fever-patient. In the blood of a boy laboring under influenza Mr. Bushman saw "*worms half an inch long.*"

> "Can such things be,
> And o'ercome us like a summer's cloud,
> Without our special wonder!"

From a number of analyses of the blood of *pregnant women* it would appear that the composition of that fluid is materially affected by pregnancy. In density it is diminished; the water, the fibrin, and the phosphorized fat are increased, while the albumen and corpuscles are diminished. The menstrual blood was subjected to analysis by Becquerel and Rodier, and the results are stated by Dr. Simon in the following paragraph:

"The most striking peculiarities of this blood are, the total absence of fibrin, and the increase of the solid constituents caused by the excess of the blood-corpuscles. The hæmato-globulin was found to be very rich in hæmatin, combined, undoubtedly, with a considerable amount of hæmaphæin; the coloring matter amounted to 8·3 of the hæmato-globulin."

The blood of the lower animals has been investigated with great care by several chemists, and the chief results are quoted at the close of this volume, where an account is also given of lymph and chyle. We shall not follow him into these details having now presented so much of the work to the readers of the Journal as will enable them to judge of its character. As a repository of facts in animal chemistry, no volume yet published in our language can compare with it.

Art. VII.—*Clinical Lectures on Surgery, delivered at St. George's Hospital.* By Sir Benjamin C. Brodie, Bart. V.P.R.S.; Sergeant Surgeon to the Queen; Surgeon in Ordinary to his Royal Highness Prince Albert, &c., &c., &c. Philadelphia: Lea & Blanchard. 1846. 8 vo. pp. 352.

The introductory lecture to the course of lectures comprised in this volume predisposes one strongly in favor of the volume and of its author. It breathes so kindly a spirit, manifests so lively an interest in the inexperienced young student, cast among strangers in a populous city, and points out with so much good sense the course of study and behavior to be observed, that the reader sets out fully certified of the benevolence of the author's heart, as well as of the soundness of his head. Sir Benjamin Brodie's is a name familiar to the American profession, and his clinical lectures, now made available, will increase his popularity on this side of the Atlantic. They will be found to be characterized, in a striking degree, by clearness of language, good sense, and a practical bearing. The course embraces thirty-nine lectures in which the following subjects are discussed: Some of the important circumstances connected with operative surgery; mortification; inflammation of the veins; varicose veins and ulcers of the legs; corns and bunions; polypi of the nose; non-malignant tumors of the tongue; paralysis; extraction of foreign bodies; fistula in ano; fatty steatomatous tumors; sero-cystic tumors of the breast; scirrhus of the breast; the administration of mercury in syphilis; local nervous affections; various forms of local hysterical affections; diseases of the hip joint; tic douloureux; hemorrhoids; prolapsus and excrescences of the rectum; preternatural contraction of the sphincter ani; ulcer on the inside of the rectum; stricture of the rectum; malignant diseases of the rectum; diseases of the maxillary antrum, and encysted tumors.

Two lectures are taken up with illustrations of some of the important circumstances connected with operations in surge-

ry, and they are lectures which will be read with great pleasure. The illustrations are numerous and apposite, furnished by the large experience of the author. He begins by referring to the fact, that, while the efficacy of our remedies in most cases of disease may be a question, in surgical operations the success or failure must be a matter of certainty. If a cure arise from an operation it is attributed to that, and that only; and if a false step be taken it is apparent to the bystanders, and brings reproach upon the surgeon. We remember well a case in point, where a surgeon of our acquaintance performed the operation of lithotomy, and when he had got into the bladder found no stone there. It is true he was able to refer to Dupuytren, as having been betrayed into a similar error; but this was not sufficient to avert from his own head the disgrace of such a blunder. The examples mentioned by our author in the subjoined quotation place the subject in a strong light:

"But an operation, while it may do good, may also be productive of evil. A man has a stone in the bladder; he is suffering torture; he has nothing but a frightful death to which he can look forward. As the least of two evils, he is content to submit to the operation of lithotomy: and, it may be, that in the brief space of three minutes he is placed in a situation of perfect comfort, and that in forty-eight hours you are able to declare with confidence that his life is perfectly safe. A man may have a disease of the knee-joint, with carious bone and abscesses; he may be worn out by pain, by perspirations, sleepless nights, and other symptoms of hectic fever. You amputate the limb; and even on that very night he may sleep soundly; there may be no more perspirations; and in a week he may be gaining flesh, and present the aspect of health. But then, on the other hand, there are other cases, in which the patient, after lithotomy, may die within forty-eight hours, although he might have lived—in misery, it is true—had he been let alone, for a year or longer. So, in the case of amputation for a diseased knee-joint, the patient, instead of recovering, may die in the course of a few days, and very much sooner than he would have done had not an operation been resorted to."

An accomplished operator, Sir Benjamin Brodie considers a man who looks well at all the consequences of an operation before he begins it, and then thinks only of the patient, and not of the figure he may be making with the bystanders.—Never, he says, "slur over a single case;" but before going about the operation consider well all the accidents that may occur. He also urges the propriety of communicating to the patient or his friends your estimate of the dangers attending the operation. And, very prudently, he cautions operators against the error of making light of trivial operations, remarking that fatal results have attended as trifling wounds as a bee sting or a leech bite.

Hemorrhage, the shock to the nervous system, erysipelatous, and other forms of inflammation, and tetanus are among the consequences to be dreaded after surgical operations, and all have often lead to fatal terminations. The judgment of the surgeon is evinced in foreseeing the danger of these occurrences, and taking steps to prevent them.

The subject of mortification is treated at great length, but we pass it over, together with a number of other topics, in order to give some account of the lecture devoted to the local nervous affections, which Sir Benjamin introduces with the following case:

"A middle aged lady, who had been exposed during a considerable period of time to the operation of causes of great mental anxiety, complained of a constant and severe pain, which she referred to a spot, about three or four inches in diameter, in the situation of the false ribs of the left side. Besides this she was subject to fits, apparently connected with hysteria, and was otherwise in a very impaired state of health. Under these circumstances she died, and on examining the body after death, particular attention was paid to the side to which the pain had been referred. No morbid appearances could be detected in it; there was neither inflammation, nor thickening, nor adhesion, nor any morbid change of structure, nor the slightest deviation of any kind from the natural condition of the part."

Upon which he remarks as follows:

"Now such a case as this is by no means uncommon. It is only one of many which might be adduced in proof of this proposition, namely, that the natural sensations of a part may be increased, diminished, or otherwise perverted, although no disease exists in it which our senses are able to detect either before or after death."

Often, however, there is a sufficient cause for these local nervous affections, as the subjoined instructive case will testify:

"A man was admitted into St. George's Hospital in the year 1808, complaining of a severe pain in the inside of his knee. The joint was carefully examined, but no marks of disease could be detected in it. In the thigh, however, there was an aneurism of the femoral artery, of the size of a small orange. This last disease had scarcely attracted the patient's notice. He said that he should be very well if it were not for the pain in the knee, and it was not until some trouble had been taken to explain to him the nature of his case, that he could be made to understand that the tumor was of any importance. Soon after the man's admission, Sir Evarard Home (then Mr. Home) applied a ligature round the femoral artery, in the upper part of the thigh. On the instant of the artery being secured the tumor ceased to pulsate, and the pain in the knee ceased also. Some untoward circumstances occurred, and the patient died about four or five days after the operation was performed. On inspecting the limb after death, the aneurism was found reduced to one-half of its former size; some branches of the anterior crural nerve, which passed over it, and which must have been kept on the stretch previous to the operation, were found to terminate in the part to which the pain had been referred, on the inside of the knee; and thus the cause of the pain was sufficiently explained. It was, in fact, a nervous pain, existing where there was no disease, in consequence of pressure on the nerves above."

Many analogous cases are recited in these lectures which will arrest the attention of the reader. Every practitioner

of experience must have met with cases similar to the following:

"A gentleman awoke in the middle of the night, laboring under a severe pain in one foot: at the same time that some other sensations to which he was not unaccustomed, indicated the existence of an unusual quantity of acid in the stomach. To relieve the latter he swallowed a large dose of an alkaline medicine. Immediately on the acid in the stomach having been thus neutralized, the pain in the foot left him.

"The late Dr. Wollaston was accustomed to relate the following history:—He ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Sometime afterwards, when he had left the dinner-table to go to the drawing-room, he found himself lame from a violent pain in one ankle. Suddenly he became sick; the ice-cream was rejected from the stomach; and this was followed by an instantaneous relief of the pain in the foot."

The following case is instructive, impressing us, as it does, with the necessity of scrutinizing all anomalous symptoms that may occur—in other words, of exercising our reasoning faculties in the practice of our profession. It was by a rigid process of induction that the author arrived at the source of the evil in this case.

"A lady consulted me concerning a pain to which she had been for sometime subject, beginning in the left ankle, and extending along the instep towards the little toe, and also into the sole of the foot. The pain was described as being very severe. It was unattended by swelling or redness of the skin, but the foot was tender. She labored also under internal piles, which protruded when she was at the water-closet, at the same time that she lost from them sometimes a large and sometimes a smaller quantity of blood. On a more particular inquiry, I learned that she was free from pain in the foot in the morning; that the pain attacked her as soon as the first evacuation of the bowels had occasioned a protrusion of the piles; that it was especially induced by an evacuation of hard feces; and that if she passed a day without any evacuation at all the pain in the foot never troubled her. Having taken all these facts into consideration, I pre-

scribed her the daily use of a lavement of cold water; that she should take the Ward's paste (*coufectio piperis composita*), three times daily, and some lenitive electuary at bed-time. After having persevered in this plan for the space of six weeks, she called on me again. The piles had now ceased to bleed, and in other respects gave her scarcely any inconvenience. The pain in the foot had entirely left her. She observed that in proportion as the symptoms produced by the piles had abated, the pain in the foot had abated also."

When we first read the lecture on fistula in ano two years ago we were so struck with the views of our author respecting the nature and origin of that disease, that we inserted the lecture in this Journal. It may be seen in the first volume of the new series. The lectures on disease of the hip-joint, that on the use of mercury in syphilis, and several others in this volume, might be profitably copied if we had the space at our disposal. It would not be easy to find in the same compass more useful matter than is embraced in each of these discourses, or indeed in this volume. We the less regret the limited extracts we have it in our power to make from it, because we feel sure that it will in a short time find its way into all the medical libraries in the country.

Art. VIII.—*A Dictionary of Practical Medicine, comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c.* By James Copland, M.D., F.R.S. Edited, with additions. By Charles A. Lee, M.D. New York: Harper and Brothers, No. 82, Cliff street. 1845. 8vo. Parts I to XIII.

No medical production of the age has called forth from the medical press stronger expressions of admiration than the work of which the name is given above. It is regarded with a feeling of astonishment as the production of one man. The labor required for the preparation of a work of such extent must be immense; but it is not so much the amplitude of the task as the excellence of its execution, that has extorted such

general and warm applause. Where the field to be gone over was so broad it was hardly to be hoped that one mind could do justice to all the topics presented; and yet each article in the *Dictionary* is a monograph so perfect in itself that it would not be easy to improve upon it. Thirteen numbers of the Dictionary have now been issued, and seven more are expected to complete the work, which will be embodied in three large octavo volumes, with small print and double columns, and is offered to subscribers at a very reasonable price.

The value of a work like the above to the practitioner who must often be going back to the authorities in his profession, it would be difficult to exaggerate. Here, in a brief compass, compressed into three volumes, and alphabetically arranged, he has a compendium of medical science and practice, by a physician of profound learning and matured experience. The opinions it expresses are such as he may generally adopt; the practice such as the experience of a long life, laboriously spent among disease, sanctions; it exhibits medical science as it was the day the articles came from the author's pen; and by the ample references at the end of each article puts it in the power of the reader to prosecute his researches to any desired extent.

Dr. Lee, the American editor, is known to his countrymen as the laborious editor of several works, and we believe the truth of our remark will be concurred in by all, that he has touched no work which has not come from his hands enriched and improved. The office which Dr. Lee has assigned himself in his present undertaking, is to supply whatever may have been added to our progressive science since Dr. Copland sent his articles to the press, and especially to add what has been done in practical medicine by American physicians. Thus far he appears to us to have performed that office with impartiality and judgment. He has ransacked our medical literature, and nothing seems to have escaped him. Appended to Dr. Copland's "bibliography," will be found references by Dr. Lee to every medical journal extant in the Union

and nearly every leading medical paper that has been written by his countrymen.

We need not insist upon the desirableness of such a Dictionary as this. Every practitioner who can spare the means will possess himself of it. Mr. James Maxwell, or Mr. F. W. Prescott, of this city, will receive and transmit orders for it, or for any other medical work published in this country. They keep always on hand an excellent stock of standard medical books.

ART. IX.—*A Practical Treatise on the Diseases of Children.* By JAS. STEWART, M.D., A.M.; Fellow of the College of Physicians and Surgeons; one of the Consulting Physicians of the Northern Dispensary of the City of New York; Late Physician to the Orphan Asylum, &c., &c. Third edition, carefully revised and enlarged. New York: Harper & Brothers, 82 Cliffe street. 1845. 8vo. pp. 544.

When a work has passed to the third edition, it may be supposed to have reached a point at which its author may be careless of criticism. The public has then set the broad seal of its approbation upon it, and it has passed beyond the reach of the press. This treatise of Dr. Stewart's is in that enviable position, and, as we should judge, without much of that laudation by which many a work has been brought into temporary favor. In this edition the Harpers have given us a fine specimen of their mechanical skill; they have issued the work in a very substantial and tasteful style, as if conscious that they were sending abroad a book that would be used. The paper and binding will bear to be handled, while its matter will instruct its readers in one of the most interesting branches of the healing art. The diseases of children—so rife, often so sudden in their incursion, and so rapid in their progress—with what force do they appeal to our sympathies! We rejoice at the appearance of every new work devoted to their special elucidation. We cannot be too sedulous in the study of their nature and cure.

This elaborate work is for sale at the bookstores of Mr. Maxwell and Mr. Prescott.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Report on the Progress of Forensic Medicine.—By Wm. Augustus Guy, M.B., Cantab. Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, Physician to the King's College Hospital, &c.

TOXICOLOGY.

Poisoning by Hydrocyanic Acid.—The subject of poisoning by hydrocyanic acid holds the same place, in point of importance, as it did in the former report. No less than five cases have been recorded in the English journals during the last half of the year. Of four of these it is proposed to give a full account, adding such additional facts and observations as can be gleaned from the cases themselves, or from the commentaries which accompany them.

Two Cases of Poisoning by Prussic Acid, by Mr. Nunneley, of Leeds.—Two interesting, instructive, and minutely detailed cases of poisoning by this acid, were communicated to the Provincial Medical and Surgical Journal, by Thomas Nunneley, of Leeds. The particulars of the first case are condensed from the evidence given before the inquest held upon the body; those of the second case, which terminated favorably, chiefly the man's own account.

The leading particulars of the first case, as gleaned from Mr. Nunneley's communication, are as follows:

The deceased purchased of a druggist an ounce of prussic acid, labelled 'Scheele's strength,' but which was subsequent-

ly proved by careful analysis to contain only 1·5 per cent. Of this it would seem *probable*, that five drachms and a half were swallowed by the deceased, as the bottle when found on his person contained two and a half drachms. The circumstances under which the poison was swallowed are involved in some obscurity; but from a comparison of all the facts detailed in evidence, or observed by Mr. Nunneley himself, it is most probable that the deceased poured the poison into a tumbler which he found on the table of a room on the ground floor, swallowed it, rinsed the glass out, threw the water used for this purpose into and about a spittoon, replaced the stopper in the bottle, and put the bottle into his pocket, ran up stairs with the tumbler to a room on the floor above, placed the tumbler on a table, and then threw himself on the sofa at the end most remote from the part of the table on which he had set the glass. About three minutes from the time the deceased was heard to enter the lower room, he was found by one of the witnesses (Mr. Tennant) lying on his back on the sofa, but as soon as he heard him enter the room, 'he sprang up, and sat upon-an-end.' He did not speak, but appeared like a man who was suffering from an excess of drink. Mr. Tennant then left the room, and returned almost immediately, when he found the deceased sitting in the same position, with the exception that he was reclining on the right side, with his head on the sofa cushion. Mr. Tennant then said, 'You seem ill, sir,' when he made an attempt to speak, but was not intelligible. The witness then went close up to him, and said, 'You must excuse my interfering with you, but you seem very ill,' and then asked if he could be of any assistance to him, if he might fetch a doctor. The deceased in reply laid his hand on his breast, and said, 'Oh no, it is too late, it is too late.' These were the only words he uttered. Mr. Tennant then rang the bell for the landlady who attended the deceased, while Mr. Tennant ran for a medical man. In her evidence she stated, that she thought the deceased was in a fit, and accordingly loosed his handkerchief and collar, and bathed his head with brandy. In about five minutes from Mr. Tennant's leaving the room, and about a quarter of an hour from the time that the deceased was heard to enter the house, Mr. Nunneley arrived. He found the deceased still lying on the sofa, resting on his right side, unable to speak, and apparently unconscious, but the pulse was still beating slowly, but distinctly. On reaching the top of the stairs, near the door of the room, Mr. Nunneley thought he detected the smell of hydrocyanic acid,

but on going to the end of the room where the deceased was, he could not detect it in consequence of the strong odor of the brandy, which had been used to bathe the head of the deceased. Suspecting that the deceased had taken hydrocyanic acid, no time was lost in dashing cold water upon him, which 'decidedly roused him.' This remedy was repeated with effect several successive times; 'it roused him, and he took a deep inspiration.' Ammonia was also administered, and freely applied to his chest. A small quantity of a solution of chlorine was also given; and the feet and legs placed in a hot mustard bath. The deceased was conscious of the administration of the ammonia. In spite of these remedies, however, 'he gradually became stiller, and sank; his legs, arms, and chest were slightly convulsed, the upper extremities more than the lower, and the jaw was fixed; the eyes were prominent and staring, and the pupils widely dilated; but before death they became much less so; they were glassy. The countenance was puffed up and dark, rather purple. There was some foam about the mouth; he breathed slowly and convulsively, something like violent sobbing. The blood-vessels were injected, and the whole of the countenance bloated. The hands were partially contracted, the fingers rigid, and about the nails of a dark lead color.' The time which elapsed between the arrival of Mr. Nunneley and the death of the patient amounted to about half an hour; it therefore follows, that he survived the taking of the poison three-quarters of an hour.

The following is a short abstract of the post-mortem appearances presented by the body five hours and a half after death:

External appearances.—Body still warm; upper parts pallid, but all the depending portions livid, the cutaneous veins, especially those of the legs, filled with fluid blood; the limbs about as rigid as is usual at the same period after death; the fingers, at the root of the nails discolored; the countenance placid, but somewhat turgid; the eyelids closed; the eyes prominent and glassy; the pupils moderately dilated; the jaws contracted, and the lips closed. 'There was the odor of hydrocyanic acid in the room near the body. The degree, however, in which this could be perceived by those present, on applying in succession the nose to the nostrils of the deceased, differed materially; by Dr. P. Smith very strongly; by myself decidedly, but not what I should call strongly; and by the other two gentlemen, scarcely, if at all; indeed, they could not say they did perceive it.' Elsewhere, Mr.

Nunneley says, 'It (the odor) was perceptible to my nostrils even before the body was opened. It was so strong that I had an effect from it for some hours afterwards; that is, constriction about the pharynx.'

Abdomen.—On opening the peritoneum, the odor of hydrocyanic acid was instantly perceptible in any part of the room; but most distinctly close to the stomach. All the viscera healthy. No odor of the acid in the intestines; but a sour smell, with an exceedingly strong odor of the acid in the contents of the stomach. The stomach contained rather more than a pint of half digested matter (he had eaten a hearty breakfast about two hours and a half before taking the acid), and its mucous membrane exhibited the turgescence of the vessels usual during the process of digestion.

Chest.—Lungs healthy; large bronchial tubes filled with reddish frothy serum. Heart healthy, but completely distended on both sides with dark fluid blood.

Head.—Chronic inflammation of the arachnoid; serous effusion on the surface and into the ventricles; substance of the brain firm, perhaps rather more so than usual.

The *chemical analysis* was performed by Mr. West. The substances submitted to analysis were the contents of the stomach, the matters contained in about fifteen inches of the ileum, two ounces of blood from each side of the heart, and three drachms of serum from the brain.

Contents of the Stomach.—Strong acid reaction; marked odor of prussic acid; decided reaction with the silver and iron tests; four-tenths of a grain of pure hydrocyanic acid; equal to twenty-seven grains of medicinal acid of 1·5 per cent. (the strength of the acid in the bottle), were obtained from the contents. From experiments on the contents of the ileum, the blood and the serum of the brain, Mr. West states that he thought himself 'warranted in stating, the arterial blood, and the fluid from the brain, as well as the contents of the ileum, to contain a distinct, though very slight trace of hydrocyanic acid; the venous blood none.' This fact is inferred from the production of a film upon a drop of nitrate of silver inverted over the substances in question. The products of the distillation of the contents of the ileum precipitated nitrate of silver, but did not yield Prussian blue: the liquid distilled from the arterial blood and serum, neither affected the silver test, nor yielded Prussian blue. It is obvious therefore, that the presence of hydrocyanic acid in these fluids must be considered to be full as doubtful as the passage just quoted would make it. The parties present thought

that they perceived the odor of prussic acid in the serum from the ventricles of the brain; 'Mr. Nunneley with some hesitation, but still he thought he could perceive it; Dr. P. Smith perceived it so decidedly as to have no hesitation about it.'

Such is a careful abstract of this extremely interesting case. Some observations communicated by Mr. Nunneley to the succeeding number of the same journal, will be noticed in their proper place.

The second case of poisoning by this acid reported by Mr. Thomas Nunneley will be found in the Provincial Medical and Surgical Journal for August 13th, 1845. When Mr. Nunneley saw the patient the symptoms had passed away, but 'he was able to give a detailed and perfectly natural account of the whole transaction, and of his feelings at the time of becoming insensible. This he repeated the next day, and the different parts of it were so confirmed by different persons, that there cannot be any doubt of its accuracy.' The patient, a book-keeper in a large manufacturing establishment, 40 years of age, bought three-penny worth of prussic acid under the pretence of poisoning animals, and on going to bed at night undressed himself by the bedside, nearly filled a wine-glass with gin, emptied the bottle containing the hydrocyanic acid into the glass, corked the bottle, and placed it on the chimney-piece, drank off the contents of the glass, which he set down, then threw down the bed-clothes, got into bed, and covered himself up. He now said to his wife, 'Well, Bessy, I have taken something, and it will be all over with me in a few minutes.' She immediately jumped out of bed, and ran screaming to the door. When she left the bed, the child, who was frightened, crept to its father, and said to him, as he informed Mr. Nunneley, 'Father, don't leave me;' to which he replied, putting his arms around it, 'No, my dear, I won't leave you.' He now perceived his jaws becoming stiff, and crammed the sheet between his teeth, thinking, as he said, that he would like something to hold by: he felt his jaws becoming stiffer and tighter, which was all he was conscious of until the water was dashed in his face, when he raised himself, and to his surprise, found several persons round the bed. He had no idea how long he had been unconscious, and said that he felt no pain till the water was dashed upon his face; the sensation he then felt, he said, was most awful, he could not describe it. About two minutes

from the time the poison was taken the wife returned, and found her husband lying upon his back, insensible, breathing hard, the eyes wide open and staring, the face 'black red.' In about ten minutes from the swallowing of the poison Mr. Bishop reached the house, and found the man foaming at the mouth, the face rather pale, and covered with large drops of sweat, the arms rigid, the hands half extended, the jaws so firmly closed as to prevent him from giving an emetic of sulphate of zinc. Mr. Bishop immediately dashed cold water over the head and neck, when the man raised himself up and became sensible; ammonia was then rubbed over the hands, the smell of which he quickly perceived, and said he felt better for it, and the sulphate of zinc was administered; vomiting soon followed, the matter ejected smelling strongly of hydrocyanic acid. About a pint of blood was next taken from the arm, which had a muddy-red brick tint, and coagulated as usual. There was a difference of opinion as to the blood having an odor of prussic acid, but the poison could not be detected in it by chemical tests. The strength of the acid was found to be three and a quarter per cent. of real acid. The quantity of acid taken was estimated at 40 drops, so that the man must have taken nearly one grain and a half of anhydrous prussic acid. Twenty minims of the same prepreparation destroyed a small half-grown mongrel dog in two minutes and a half, and a full-sized terrier bitch in one minute.

A report of the same case by Mr. Edward Bishop, surgeon of Kirkstall, agreeing in all essential particulars with the foregoing, will be found in the Lancet for 20th of September, 1845.

Two Cases of Poisoning by Hydrocyanic Acid, by Mr. Hicks, of Newington.—Mr. James Hicks of Newington, has made an important addition to our knowledge of the effects of prussic acid, by the publication of two cases, accompanied by some judicious comments, in the pages of the Medical Gazette. The first case is an abridgement of one published in a former number of the Gazette; the second is related for the first time, from memory. The following are the leading particulars of the first case. A female, about 22 years of age, swallowed a draught containing, as ascertained by analysis, *nine-tenths* of a grain of pure anhydrous acid. It appears from the statement of the father, who was present when the medicine was taken, that, on swallowing it, the girl started up, threw her hands over her head, drew a deep gasp-

ing breath, stood for a second, and, then, running forward for a short distance with great violence, fell with her head first to the ground, after which she never moved, but continued to make a moaning noise for five minutes afterwards. On Mr. Hicks's arrival he found the girl lying on her back, perfectly insensible, with her teeth clenched, foam issuing from her mouth, and the face so greatly congested as to be almost purple; the breathing was slow, laborious, and at long intervals; the pulse imperceptible, and the action of the heart indistinct; the eyelids were partly closed, the eyes appearing as if pushed forward between them, the pupils fully dilated and insensible to light; the body was so strongly convulsed that the head seemed buried between the shoulders, and the arms were nearly turned round by the action of the pronator muscles. Mr. Hicks's first impression was, that the patient was laboring under some form of epilepsy; but having ascertained that the symptoms came on immediately after taking a dose of medicine, he was soon convinced, by the taste and smell of the liquid, that she had taken prussic acid. Ammonia was accordingly applied to the nostrils, the cold affusion to the head, and a fruitless attempt was made to administer some brandy and ammonia. In spite of this treatment 'the breathing became gradually slower, and at longer intervals, until it entirely ceased, death appearing to have been caused, in this instance, by the perfect inability of the patient to get air into the lungs by inspiration; the time that had elapsed between taking the poison and death being twenty minutes.

The body was examined ninety hours after death, and presented the following appearances. Externally it had much the appearance of that of a person who had died of asphyxia; the teeth were clenched, the mouth covered with foam, the face of a dusky red hue, and the whole of the depending parts of the body of a dark purple or violet color. The internal appearances were as follows:

Head.—The dura mater and sinuses much congested, the whole substance of the brain dotted with fluid black blood, the ventricles empty, and the plexus choroïdes pale and bloodless. No odor of prussic acid perceptible.

Chest.—Odor of prussic acid distinctly perceptible, far more so than in any other part of the body; lungs healthy, but much congested; the right ventricle of the heart loaded with blood; the aorta empty; the blood fluid and very black.

Abdomen.—Stomach containing about four ounces of fluid, smelling strongly of prussic acid; its lining membrane, with

the exception of a small red patch on the posterior part, near the cardiac orifice, healthy; the kidneys much congested, and of a dark pinkish hue; the rest of the viscera healthy.

The contents of the stomach were examined five days after death. The odor of prussic acid was still perceptible, and the poison was detected by the iron and silver test. It was ascertained that the quantity of the poison taken did not exceed *nine-tenths* of a grain of pure anhydrous acid, a quantity equivalent to 18 grains of Scheele's acid, or 45 of the pharmacopœial acid, the former of which contains five per cent., and the latter two per cent.

A report of this case, differing but little from that published in the Medical Gazette, was communicated by Mr. Hicks to the Lancet, and is followed by a short account of the same case drawn up by Mr. Watson and communicated by Dr. Letheby. The only discrepancies which it is necessary to point out are the following:

1. The prussic acid lotion, which was taken by mistake, contained, according to Mr. Hicks, three grains and a half of anhydrous acid; but according to Dr. Letheby's analysis, four grains. The fourth part, therefore, would contain, according to the first estimate, rather less than nine-tenths of a grain; and, according to the second, one grain.

2. Mr. Hicks states that death took place in twenty minutes; Dr. Letheby, on the authority of Mr. Watson, 'just fifteen minutes from the time of her taking the medicine.'

3. In addition to the statement that the odor of the prussic acid was distinctly perceptible, in the chest, we are told that 'this was still more marked in the fluid contained in the pericardium.'

4. The chief discrepancy, however, is to be found in the description of the stomach and its contents. Dr. Letheby says, 'the stomach contained two ounces of a thick whitish fluid, apparently composed of biscuit and water. Neither of the three gentlemen whom I have named (Messrs. Watson, Waterworth, and Hicks), could detect any odor of prussic acid; but it was evident to myself, even on the following day. On subjecting it, however, to a chemical analysis, I could but barely recognise the presence of this poison. The interior of the stomach presented those marks of ecchymosis which I have noticed and described in my three former cases.' The following facts are necessary to complete the case. The deceased did not speak after taking the poison. She was not sick; nor were the fæces or urine expelled.

The absence of the shriek or scream has been already noticed.

Mr. Hicks's second case is as follows: 'A girl having quarrelled with her lover, expressed a wish to leave the room, on account, as she stated, of feeling faint; but she had not done so more than a minute when she was observed to throw her hands over her head, and then fall to the ground; the breathing for a time was quite imperceptible, when, after making a few gasps for breath, she died five minutes after taking the poison, without having been in the least convulsed from the first. Within a short time after she died I arrived at the house; at this time the body was still warm, but, with the exception of a pallid state of the countenance, there was not an unnatural appearance to be seen about the corpse. It appears in this case that the girl took the poison as soon as she had left the room, and that she merely complained of feeling faint as an excuse for doing so. But the most interesting facts were, that, notwithstanding the dose was large, being an ounce of Scheele's, she had sufficient time to put the bottle into the front of her dress prior to volition being destroyed, while, at the same time, there were no convulsions, neither was there any scream, the girl falling down without making any noise whatever.'

Case of Poisoning by Prussic Acid, by Dr. Guy.—This case, of which the leading particulars are stated below, is interesting, first, by showing that a considerable interval of perfect consciousness, and complete command over the voluntary muscles, may intervene between the swallowing of a large dose of the acid and the development of its characteristic effects; and, secondly, as an instance of attempted suicide, in which the impulse to the commission of the act preceded the act itself by a very short interval of time.

There are some few facts of importance established by the foregoing cases which deserve to be briefly considered. This will be best done under distinct heads.

Symptoms.—*The Shriek.*—The preceding cases give no confirmation to the importance attached to the shriek as a symptom of poisoning by prussic acid. In Mr. Nunneley's fatal case no shriek was heard, and it is highly improbable from the facts detailed in evidence that any could have been uttered. The shriek was also absent in Mr. Nunneley's second case, in both the cases reported by Mr. Hicks, and in

Dr. Guy's case. It is very difficult, therefore, to understand whence the strong impression which has existed as to the importance of this symptom could have arisen. It is certainly not from observation in the human subject, unless indeed the exclamations uttered in one or two reported cases, or the loud gasping inspirations observed in other instances, have been confounded with a scream or shriek; so far from the shriek being a common symptom, Mr. Hicks says, 'Although I have read over every case published in the different works on poison and medical jurisprudence, I have not found a single instance where a shriek has been mentioned as occurring prior to death.' In animals, moreover, the shriek, though of more frequent occurrence than in the human subject, is by no means a constant symptom. Even when, as in the case of Mrs. Belaney, a shriek is reported to have been uttered, it is by no means satisfactorily made out that the scream or shriek was a symptom of poisoning by prussic acid. It is fully as reasonable to suppose that in her case it was a simple expression of alarm on finding that she had swallowed some of 'that hot drink,' of the fatal properties of which she was probably not ignorant. In the case of Sarah Hart, the noise which alarmed her neighbor was not a shriek, but 'a moan or stifled groan,'—probably the loud gasping inspiration which was so marked a symptom in Dr. Guy's case.

Acts of Volition.—The foregoing cases form a very useful addition to our information on this subject. In Mr. Hicks's second case the girl threw her hands over her head, fell to the ground, and after a few gasping respirations died in five minutes. The only act of volition consisted in placing the bottle in the front part of her dress. His first case was marked by strong muscular contractions but by no act of volition. The girl started up, threw her hands over her head, drew a deep gasping breath, stood for a second, and then, running forward for a short distance with great violence, fell with her head first to the ground, after which she never moved, but continued to make a murmuring noise for five minutes afterwards. She died at the end of twenty minutes. The other three cases were characterized by the performance of several acts of volition. After a dose of prussic acid which under less favorable circumstances would probably have proved rapidly fatal, the young lad, whose case is recorded by Dr. Guy, after swallowing the poison got out of bed, walked round the foot of the bed to a chest of drawers at some little distance from it, placed the stopper very firmly in the bottle, laid it on the drawers, walked back to bed, sat on

the side of it, and then for the first time lost all consciousness. Mr. Nunneley's cases are still more remarkable, as the patients not only moved about, but spoke and answered questions after taking the one a fatal, the other a large, dose of prussic acid. The two cases were among the most remarkable and instructive yet recorded. For the several acts of volition performed, the reader is referred to the cases themselves. The fact, that both patients enjoyed the use of speech for some little time after taking the poison, is well worthy of remark. The subject of the first case answered a question addressed to him some minutes after he had swallowed the poison, and the man who recovered retained the use of his speech till the jaws gradually closed. If these facts had been known to the profession before the trial of Belaney, the medical witnesses would not have expressed themselves in such decided terms as to the improbability of voluntary motion or speech after the utterance of the shriek, especially if they had formed the very feasible opinion just expressed, that the shriek might not, after all, have been a symptom of the poisoning, but merely an expression of terror uttered during the interval of perfect consciousness and self-command which so often follows immediately on the swallowing of the poison.

Duration.—In Mr. Nunneley's first case, the duration, as far as it could be ascertained, was three-quarters of an hour; in Mr. Hicks's first case fifteen or twenty minutes, in his second case five minutes.

Dose in Fatal Cases. Smallest Fatal Dose.—In Mr. Nunneley's fatal case, the quantity could not be ascertained. It is probable, however, that it amounted to four drachms and a half of acid containing one and a half per cent. of pure anhydrous acid. One ounce had been purchased, and the bottle when found contained two drachms and a half. At any rate, this case throws no light on the question of the smallest dose which may prove fatal. In Mr. Hicks's first case the fatal dose did not exceed *nine-tenths* of a grain of anhydrous acid, or, according to Doctor Letheby's analysis, one grain.

Quantity taken in Cases of Recovery.—In Mr. Nunneley's second case, the quantity of anhydrous acid taken was estimated by Mr. West at one grain and a half. In Dr. Guy's case, neither the quantity nor the strength of the preparation could be ascertained.

TREATMENT. *Cold Affusion.*—'Of all the remedies I am acquainted with,' says Mr. Nunneley, 'I should be disposed to place most reliance upon cold affusion. In this instance (the fatal case) more effect was produced by the dashing of cold water than by any other means.' By way of illustration of the value of this remedy, Mr. Nunneley gives the following: 'Some years ago I well recollect taking a large Newfoundland dog to the side of a pond, and giving him upwards of a drachm of hydrocyanic acid, originally of Scheele's strength, but having been kept some time, it had probably lost something of its strength, yet, I am convinced, was sufficiently potent to destroy life. He almost immediately began to stagger, when two of us seized him by the legs, and threw him into the water, in which he swam about for a time, and presently came out, not much the worse for the dose.

Tests.—Mr. Nunneley, in citing Mr. West's analysis of the contents of the stomach in the fatal case reported by him, impugns the accuracy of the statement made in toxicological works, that the cyanide of silver is insoluble in cold, though soluble in boiling nitric acid. Dr. West says, 'I applied the acid, cold, to the washed precipitate, and found it to dissolve without heat. I formed a fresh portion of cyanide from some of Scheele's acid; this also dissolved in cold nitric acid. It appears, therefore, that the supposed insolubility is at most a matter of proportion, and should not be described as a characteristic of the cyanide.' Mr. Nunneley corroborates this statement. 'I have tried the effect of nitric acid upon cyanide of silver, made with hydrocyanic acid of different strengths, as well as nitrate of silver solutions of different strengths, and I am satisfied that it is, as stated, only a question of proportion. If the precipitate is not very copious, and occasioned by only weak solutions of the acid and salts, then cold nitric acid dissolves it, even if the acid be not of the strongest; but, on the contrary, if the precipitated cyanide be abundant, in large flakes, and made from stronger solutions of the nitrate of silver and hydrocyanic acid, then concentrated boiling nitric acid is required for its solution.' [This statement is correct, and as it affects the value of a very delicate test, on which much reliance is placed, it is not unimportant.]

Mr. HICKS has tested the relative delicacy of the iron and silver tests, and of the odor of the acid. When the tests were added to the solution of the acid the limit in the case of

the iron test was 1 minim of prussic acid to ℥iv distilled water: in the case of the silver test, 1 minim to ℥xvj, with which quantity a milkiness was obtained. There was a faint color when the proportion was 1 minim to ℥iv, and a doubtful result with ℥viij and ℥xvj. When watch-glasses moistened with caustic potash and a solution of nitrate of silver respectively, were held over the solution of hydrocyanic acid, sulphate of iron and muriatic acid being subsequently added to the liq. potassæ, the iron test gave 'traces' of its characteristic action with 1 minim in ℥viij, and the silver test a film with as high a degree of dilutation as 1 minim in ℥xxxij. It would, therefore, appear that the modification of the iron and silver tests proposed by Mr. Taylor, possesses, as might be anticipated, greater delicacy than the same tests added to a solution of the acid. Mr. Hicks has also instituted some experiments, with a view of determining the value of this modification of the iron and silver tests as applied immediately, and without previous distillation, to the human body or to the contents of the stomach.

The following is a short summary of Mr. Hicks's experiments:

1. The stomach of a dog, which had been killed by three drachms of prussic acid, after being well washed and allowed to remain sometime in water, was placed in a wide-mouthed bottle, over which a watch-glass, moistened with nitrate of silver, was placed. In ten minutes a white film of the cyanide of silver was deposited on the glass.

2. A cat was killed by 20 minims of Scheele's acid poured into the mouth. Eight hours after death, a small aperture was made in the parietes of the chest, and a watch-glass accurately fitted over it. In half an hour a white margin was formed, and, in an hour, the whole portion wetted with the nitrate of silver was covered with a distinct film of the cyanide, perfectly insoluble in cold nitric acid, but soluble in the acid when boiled. The iron test subsequently applied, gave no indication of the presence of prussic acid. The whole contents of the chest, the stomach, and the lower part of the mouth, were then placed in a bottle, and, on the glasses being applied accurately, the presence of the acid was indicated by both tests. But, on submitting the same to distillation, it could not be detected in the distilled liquor, either by the odor, or by the iron and silver tests.

3. The third experiment consisted in pouring into the stomach of a man, who had recently died, half a pint of por-

ter mixed with half a drachm of Scheele's acid, containing 4 per cent. or 1·12 grains of anhydrous acid. It was laid in a cool place, and examined two days after. The liquid, which had a *beery* smell, but no odor of prussic acid, was put into two bottles, over the mouths of which strips of glass moistened with liq. potassæ and solution of nitrate of silver, were placed. In less than ten minutes, most decided proofs were obtained of the presence of the acid, by the formation of white cyanide of silver in the one and Prussian blue in the other, on the subsequent addition of ferri sulphas and muriatic acid.

Odor.—Mr. West, who performed the analysis of the contents of the stomach, and the other fluids taken from the body, in the fatal case recorded by Mr. Nunneley, says, 'I have distilled a portion of the contents of the stomach, at this time, twenty-three days after the poison had been taken, and find the smell, the precipitate with nitrate of silver, and the Prussian blue precipitate. All these are produced, apparently, in the same degree as at first. This case is, therefore, opposed to the common notion of rapid decomposition of the acid.'

Mr. Hicks, in the course of his comments on the first case reported in the Medical Gazette (New Series, No. 14), draws attention to the fact that the odor of the poison was more distinctly perceived on opening the chest than even in the abdomen, and he corroborates this statement by experiments on animals. 'In many instances,' he says, 'where I have destroyed rats, the quantity has not exceeded four minims of Scheele's acid; still, on opening the chest immediately after death, as soon as all the signs of life had disappeared, the odor has been distinctly recognized in that cavity, even when not at all presented in the stomach.'

Experiments on Animals.—The following observations form part of Mr. Nunneley's commentary on the case reported by him in the Provincial Medical and Surgical Journal: 'Out of the great number of dogs, cats, and rabbits, which I have destroyed by the acid, I believe the majority did not shriek.—In some the effect is almost instantaneous,—a few violent struggles, followed by a rest; then a struggle and cry; an involuntary passing of the urine or fæces, and death,—the heart pulsating for sometime after. All other appearances of life have gone, the creature scarcely having moved from the spot. At other times I have seen a dog run about staggering for a minute or more, making attempts to howl, but

without succeeding. On the whole, I cannot but think that the instantaneous effects of hydrocyanic acid have been exaggerated, and that the quantity necessary to procure death has been somewhat under-estimated. But different animals will be very differently affected. Thus, birds die almost instaneously. It is sufficient to put the beak of a small bird (a sparrow) into the mouth of a bottle containing only a very small portion of the acid, and the vapor will, in a few seconds, quietly, as though paralysed, without convulsions, destroy it. Mice are very susceptible of its action; rabbits are much more so than either dogs or cats. On the other hand, cold-blooded animals are almost proof against its influence. I have given it to frogs without producing much effect.'

Mr. Hicks states, *inter alia*, that in experiments on dogs and cats he has never known a longer period than forty seconds to elapse before the effects of the poison became visible; and that he has not met with a single instance of death taking place without being preceded by convulsions. He also confirms the statement made by Mr. Blake, that the effects of the acid are not so prompt when it is introduced directly into the stomach, as when its vapor has access to the lungs.

Some useful comments on recent cases of poisoning by prussic acid, on the tests for the poison, and on the treatment, will be found in the Monthly Journal of Medical Science. Much stress is there laid on the value of bleeding from the jugular vein, as a remedial agent, and the practice is enforced by a long quotation from Dr. Lonsdale's treatise.

Poisoning by Bitter Almonds.—Dr. Letheby reports the following case, which is given with slight abbreviations. A boy, 13 years of age, was left in charge of his father's shop. He was seen well and cheerful at half past 3 o'clock in the afternoon, but a little before 4, his sister, a child ten years old, found him lying on the floor. She immediately called the father, who found him stretched along the floor upon his back, perfectly motionless and insensible; his face deadly pale; his eyes open and rolling from side to side, and panting for breath. His father raised him into a sitting posture, and then noticed that his limbs, though quite supple, were powerless. In five minutes he was seen by Mr. Henry, a surgeon, who found him still insensible, his countenance placid, but very pale, his eyes half open, fixed, and the pupils dilated, and the lid did not move when the eye was touched. He was breath-

ing slowly, deeply, and at intervals of a minute or so. The pulse at the wrist was gone, though the heart was still beating feebly. Cold water was dashed over the head and face, and an ineffectual attempt was made to administer stimuli by the mouth. About four or five minutes after his arrival the child died, and it is presumed that this must have been about a quarter of an hour from the time of his swallowing the poison. *Post-mortem* examination twenty-four hours after death. Face, placid but pale; eyes, half open; foam at the mouth, having the odor of bitter almonds. The depending parts of the body livid; the lungs congested; the right side of the heart gorged with dark fluid blood; the odor of the poison perceptible in the abdomen, but not elsewhere. The stomach contained twelve ounces and a half of a pulpy, semi-fluid matter, in process of digestion, and having a strong odor of bitter almonds. The internal coat of the stomach, with the exception of some red petechial patches along the greater curvature, was pale. On distilling the contents, with nitrate of silver, one grain of cyanide of silver was obtained, indicating about two-tenths of a grain of pure hydrocyanic acid. On further distillation the volatile oil of the bitter almonds was obtained, free from prussic acid. The points of medical interest in the case were the absence of convulsions; the fact that the boy did not speak after he was seen, that there was no scream, and no evacuation of the stomach, bladder, or rectum. He appeared to die from paralysis of the respiratory muscles, the breathing becoming slower and slower.

Dr. Letheby adds the following summary of the symptoms of poisoning by this agent. 'Those symptoms which appear to be most constant in the case of poisoning by bitter almonds or cherry laurel, are a cadaverous or mortal paleness of the face and body, together with great coolness of the extremities; an almost imperceptible pulse, a slow or panting respiration, and, in the generality of cases, there are no convulsions, but a paralysis, first of the voluntary muscles, and then of the involuntary; after this a profound coma supervenes, and then death. Upon a post-mortem examination, we find nearly the same appearances which hydrocyanic acid produces. The face and highest parts of the body are generally pale, the dependent livid, the countenance is generally placid, the eye half open, glassy, and prominent, the pupil dilated; foam may be adherent to the mouth, and it will smell of the poison; the lungs are greatly congested; the right side of the heart, and the venæ cavæ, gorged with

black, uncoagulated blood; the cavities generally have a strong odor of the bitter almond. The stomach may or may not be empty; its contents will always, if recently opened, give out a powerful smell of the oil; the inner coat is generally pale, excepting in one or two places, where there will be a blush of red (I have seen this in three cases of poisoning by oil of bitter almonds), and, altogether, there will be less doubt of the action of the poison than in a case of poisoning by prussic acid, for a greater evidence will be furnished by the odor, which is sure to be present in the stomach.'

Poisoning by Acetate of Morphia.—An apothecary's assistant, 24 years of age, swallowed, at noon, fifty-five grains of acetate of morphia, in two ounces of gum water. He then forwarded a letter to his master, informing him of what he had done. The master arrived in half an hour, and gave him, with some difficulty, and without effect, two grains of tartar emetic in an ounce of water, followed by two tablespoonfuls of olive oil. Up to this time the only symptom present was slight giddiness, which soon disappeared, and the lad went for a walk with one of his companions, entered a café, and drank half a bottle of beer. At the end of an hour and a half the lad complained of slight giddiness, a sensation of weight in the limbs, and a slight tendency to sleep. After two hours he was taken to the hospital, put to bed, and made to swallow three grains of tartar emetic, and twenty-four grains of ipecacuanha, in two doses, at an interval of half an hour. Though the operation of the emetics was assisted by tickling the throat, vomiting did not occur, and an œsophagus tube was introduced without effect. At the end of two hours and a half the face, which was previously pale assumed a violet hue; the eyes were injected, and turned upwards and outwards; a viscid perspiration broke out on the skin; the hands and legs grew cold and livid; the lad answered questions only by monosyllables; fell by degrees into a profound sleep; the head fell forward on the chest; the eyelids closed; and the body when left to itself, fell on the side; the legs bent under him;—in a word, he was in the condition of a drunken man. The breathing in the meantime was natural. A pound of blood being taken from the arm, the patient rallied slightly, and complained of not being able to swallow. The pulse, which up to this time was soft and somewhat frequent, became full, hard, and slow,

and there was a troublesome itching on the forehead, nose, and lips. This symptom, which began at the end of an hour, was at its height in two hours, and after four hours existed only at long intervals. The treatment now consisted of ammoniacal frictions to the belly and extremities, moxas to the legs, and repeated shaking of the body; but all in vain. The face was distorted; the eyes dull and sunken, and drawn upwards and outwards; and the entire surface of the body was icy cold. At the end of three hours a drachm of tincture of iodine, and the same quantity of hydriodate of potash, in three ounces of water, was given in two doses, at an interval of a quarter of an hour. Immediately after the second dose, the patient rejected what he had taken, but he slept while he was vomiting. Strong coffee was then given every five minutes, which was followed each time by vomiting. Four hours—The coma is still more strongly marked, and the patient can only be kept roused by pinching, tickling and shaking him strongly. He can be made to speak, but will leave a word half uttered. He was again bled to the same extent as before, with the effect of lessening the coma. Four hours and a half—Face violet; the members contracted and stiffened; he is speechless, and cannot be made to open his eyes. Friction of caustic ammonia to the epigastrium, and a blister to each limb. At the end of five hours a third bleeding was performed; strong coffee was still administered, and two blisters were applied to the shoulders. Five hours and a half—From this time the patient began to improve; opened his eyes, though with great difficulty; regained the use of his speech, and endeavored to explain his state to the bystanders. At the end of six hours he recognized the reporter, asked him how he did, inquired whether he did not think him very ill, and expressed surprise that he had survived fifty-five grains of acetate of morphia. At the end of seven hours the symptoms were slowly improving; he could struggle successfully against his tendency to sleep; his ideas were clear; and he could see, as he said, all that was passing, as if through a cloud. At eight o'clock the next morning, sixteen hours after taking the poison, the report was that he had vomited repeatedly during the night, and still continued to do so. On his forehead there was seen a vesicular eruption, which accounted for the itching of the previous day. He still complained of heaviness of the head, and confusion of intellect. On the following day he was nearly well, and left the hospital on the morrow. He still continued to complain of eructations, having the intense bitter taste of the

morphia. M. Bonjean regrets that he did not administer a solution of tannin, according to the suggestion of Orfila; and he adduces an experiment to show that the acetate of morphia is completely decomposed by that agent.

Poisoning by Poppy-heads.—The Gazette des Hôpitaux (April 15, 1845) quotes from the Echo de la Frontière, published at Valenciennes, the following cases. Three children of one of the faubourgs of Cambrai sucked some unripe poppy-heads, and soon after, on going home, fell asleep. In the middle of the night the mother was roused from sleep by the unusual sound of their respiration, which consisted of a short laborious râle. At the same time, the eyes were found wide open, the countenance pale and haggard, and the body convulsed. A medical man was immediately sent for, who succeeded in saving two of the children. Fruitless efforts were made to introduce an emetic into the stomach of the youngest; deglutition was arrested, the infant foamed at the mouth, and expired four hours after.

Poisoning by Hemlock (conium maculatum).—The children of one Duncan Gow, a tailor, of Edinburgh, found what they took for parsley, growing under Sir Walter Scott's monument, and took it home to their father, who, having fasted the whole day, greedily ate the vegetables, with a piece of bread. The quantity taken could not be ascertained, but it probably amounted to several ounces. The history of this case, from the time of the fatal meal, is carefully compiled from the evidence of the several parties who subsequently saw Duncan Gow. The first effect was loss of power in the inferior extremities, unattended by pain. This showed itself soon after the meal. 'His gait, which at that time was faltering, afterwards became vacillating—he staggered as one drunk; at length his limbs refused to support him, and he fell. On being raised, his legs dragged after him; and, lastly, when the arms were lifted, they fell like inert masses, and remained immovable. Perfect paralysis of the inferior extremities was ascertained to exist one hour and a half after the poison was taken, and that of the arms half an hour later.' The complete paralysis of the legs was accompanied by amaurosis; the excito-motory functions were also inferred to be paralysed, from the fact that tickling the armpits failed to produce any movement of the upper extremities. He lost the power of deglutition, and made ineffectual efforts to vomit. 'There were no convulsions, only slight occasional movement of the

left leg; and, lastly, both inferior extremities were slowly drawn upwards when placed over the iron of the stretcher. Three hours after taking the poison, the respiratory movements had ceased; the pupils were fixed. At this time the heart's action was very feeble, and ceased altogether ten minutes afterwards. The intelligence remained perfect nearly to the last; two hours after taking the poison he still retained the use of his speech, and a quarter of an hour after that still appeared sensible, though he could not articulate. The post-mortem appearances were, an unusual quantity of fluid blood in the vessels of the scalp, and in the sinuses of the brain; slight serous effusion beneath the arachnoid membrane, and into the ventricles; and numerous bloody points in the substance of the brain. The lungs were 'throughout intensely engorged with dark-red fluid blood. There were a few small clots of blood in the heart. The blood throughout the body, was of a dark color and fluid, even in the heart and large vessels. The stomach contained a pultaceous mass, formed of some raw green vegetable resembling parsley. Its contents weighed eleven ounces, and had an acid and slightly spirituous odor. The mucous coat was much congested, especially at its cardiac extremity. Here there were numerous extravasations of dark red blood, below the epithelium, over a space about the size of the hand.' The intestines and other viscera were healthy, but partially congested. On examining the contents of the stomach more minutely, it was found to consist chiefly of fragments of green leaves and leaf-stalks, and on a specimen being submitted to Dr. Christison, he recognised the *laciniæ* of the *conium maculatum*, or common hemlock. On bruising some of the leaves in a mortar, with a solution of potash, the peculiar mousy odor of conia was at once evident. The conium maculatum was also found growing on the spot from which the leaves had been gathered. Dr. John Hughes Bennet, the reporter of this case, accompanies it by some judicious comments, and shows the striking analogy of the symptoms to those recorded as having followed the drinking of the *Koneion* by Socrates; and justly observes, that that analogy is strongly in favor of the opinion of the identity of the poison swallowed by Socrates and the conium maculatum.

Poisoning by Arsenic.—The trial of James M'Kerlie, before the circuit court of Judiciary, at Glasgow, in April, 1845, as reported in the London and Edinburgh Monthly Journal, for June, 1845, comprises some points worthy of notice.

Three persons, a father, his son, and a shopman, partook of the same dish (kail), and some was also given to a dog.—They were all affected more or less severely, but, after frequent vomiting, recovered. The occurrence of vomiting in the dog first excited suspicion as to the cause of the illness being in the food. Dr. Paton, who was first called in, stated that he had tasted the broth, and that it had an acrid, pungent taste, and a powerful effect upon the teeth, from which he concluded that there was arsenic in it. This statement, so much at variance with the experiments of Dr. Christison, deserves to be put on record, though it must be admitted to be quite possible that the acrid, pungent taste might be due to some other substance contained in the broth, and used as seasoning. Arsenic was found in the broth by all the approved tests, and the results communicated in an excellently worded report, drawn up by Drs. Penny and King, of the Andersonian University. James M'Kerlie was proved to have purchased arsenic, under the usual pretence of poisoning rats, and to have been in the kitchen during the cooking of the broth. These, with other suspicious circumstances, induced the jury to find a verdict of guilty, and the prisoner was sentenced to transportation for life.

An interesting and instructive case of triple poisoning by arsenic is recorded by Dr. Bayard. The author's principal object in publishing these cases was to show the care which ought to be taken in medico-legal researches, and the little attention which ought to be paid to mere popular rumors. All the circumstances of the case, and the opinion of the medical men, who saw the deceased during life, were strongly opposed to the idea of poisoning; and it was not till the fifth member of the same family died in the short space of two years, that any suspicions of foul play were expressed. The bodies were then ordered to be examined, when, in three out of five, arsenic was discovered.

Poisoning by Mercury. Protochloride of tin as an antidote for corrosive sublimate.—M. Poumet, of Orleans, has examined the value of protochloride of tin as an antidote for corrosive sublimate, by means of a series of well-conducted experiments, and he arrives at the following conclusions:

1. Dogs which are made to take a solution of corrosive sublimate containing 15½ grains, 7¾ grains, or 1½ grains of the poison, die, even though allowed to vomit freely.

2. Dogs which are made to take 31 grains of the proto-

chloride of tin in solution recover readily and promptly, even when they are prevented from vomiting.

3. The black precipitate, and the supernatant liquid, the results of the mixture of the salts of tin with a solution of corrosive sublimate, are not poisonous.

4. A solution of the salts of tin, of twice the strength of the solution of corrosive sublimate, when introduced into the stomach, directly after swallowing the poison, neutralizes, instantly and completely, the deleterious property of the salt of mercury, even when the animal is prevented from vomiting.

5. This favorable result takes place, in one-fourth of the cases, when the antidote, instead of being administered immediately, is given a quarter of an hour after taking the poison.

6. The protochloride of tin, then, is an antidote to corrosive sublimate.

7. Would it not be exactly the same with the sulphate and nitrate of mercury? M. Poumet states, that he has reason to answer this question in the affirmative.

In the case of the corrosive poisons, the best antidotes are those which can be most promptly obtained, and as it is much more probable that white of eggs would be at hand in a case of poisoning by corrosive sublimate, than a comparatively rarer agent, the protochloride of tin, it is not likely that this latter substance, though doubtless an antidote to corrosive sublimate, will ever come into use.

Poisoning by Corrosive Sublimate externally applied.—John Welch, a druggist, was tried at Worcester, June 18, before Lord Denman, for causing the deaths of two children by a lotion containing corrosive sublimate applied externally for the cure of ringworm. The lotion was applied to the heads of three children. It caused pain, followed by violent inflammation, vesication of the forehead, uneasiness and fever, pain in the head and bowels, and sickness. These symptoms were followed in one of the fatal cases by profuse salivation, ending in sloughing of the gums and tongue. The jury returned a verdict of not guilty, and thus held out an encouragement, scarcely required to unlicensed persons to exercise an art which no previous training has prepared them to understand. No evidence was given as to the death of the other child. The nature of the poison was strongly inferred, but was not proved by analysis.

A case of poisoning by corrosive sublimate, mixed by mis-

take with sulphate of potass, is related by M. Jean-Baptiste Chevallier. The poisonous mixture was administered by a quack midwife, who was tried before the Tribunal de Premiere Instance de la Seine, for the illegal exercise of pharmacy and the profession of medicine, and involuntary homicide by imprudence. The nature of the mixture was ascertained by chemical analysis.

Poisoning by Copper.—The existence of a copper colic in men who work with metal is a subject upon which some doubt has been expressed, its symptoms being attributed to the lead with which it is combined. M. Blondet, in a memoir read before the Academy of Sciences. asserts the reality of the poisonous effects attributed to copper, and describes the colic which it occasions as being subject to remission, characterized by severe pain, increased by pressure, and accompanied by headache, nausea, and diarrhœa, or constipation. The vomited matters are bilious, and the first alvine evacuations are often of a green color. Fever is a somewhat rare accompaniment. In men who are not cleanly, the hair is green; the perspiration of the same color; and the teeth are covered by a grey coating of sulphuret of copper. The prophylactic measures proposed by M. Blondet are the habitual employment of an albuminous drink, and saline purgatives when the bowels are costive. Cleanliness, though not mentioned, is an obvious item of the prophylaxis.

Poisoning by Zinc.—M. Blondet, in a memoir presented to the French Academy of Science, directs attention to the symptoms brought on by the fumes arising from zinc used in bronze and brass founding. Heavy pain in the stomach, nausea, loss of appetite, cough, oppression, fixed pain in the head and a sense of tightness across the temples, noise in the ears, which continues during the night, general debility, tetanic stiffness and soreness of the limbs, rigors, trembling of some hours continuance, nightmare, a sensation of swelling, cold sweats preceded by flushes of heat. These symptoms disappear on awaking from sleep, but lassitude and soreness still continue.

Poisoning by Sulphuric Acid.—A case of poisoning by sulphuric acid, is reported by MM. Chevallier and Ollivier, which is chiefly interesting from the circumstance of the nature of the poison having been ascertained by an analysis of

the clothes, after an examination of some of the vomited matters and of the contents of the stomach had failed—a failure attributed to the free discharge of the poison by vomiting. The post-mortem appearances were very characteristic, and such as to render unnecessary the application of the tests for prussic acid, arsenic, and corrosive sublimate, which the reporters thought it necessary to use.

Poisoning by Savin.—An extremely interesting and instructive case of poisoning by this substance, administered to a pregnant female, with fatal effect both to mother and child, occurred in the month of May last, and was the subject of examination in the coroner's court before Mr. Wakley. The poison was identified by the aid of the microscope, the green substance found in the stomach being compared with a portion of powdered savin. Mr. C. Johnson, lecturer on botany at Guy's hospital, stated that on examining a portion of the powder under the microscope, he was enabled to determine it to be the part of a leaf of a plant of the pine genus, by the peculiar arrangement of the glandular apparatus of the leaf, and further, that it was savin by the exact correspondence of the glandular apparatus in question with that of a portion of savin powder examined at the same time. There was the same correspondence between the shape of the extremity of the leaf of the substance found in the stomach and a fragment of savin. The shape of the leaf was widely different from that of the yew, a poisonous plant belonging to the order coniferæ. The contents of the stomach were further identified by their odor. Mr. Alfred Taylor calculated the quantity of savin contained in the stomach at from 25 to 30 grains. The deceased had vomited freely, and brought up a large quantity of green matter which the medical attendant took for bile. The absence of other poisons, whether mineral or vegetable, was ascertained by Mr. Taylor. The jury returned a verdict 'that the deceased, Caroline Hillman, died from the effects of a certain poison called savin; but whether taken for the purpose of destroying life, or procuring abortion, there is not sufficient evidence to show, and that her male infant died a natural death.'

Poisoning by Sulphate of Quinine.—M. Desiderio communicated to the February sitting of the Royal Academy of Medicine, the results which he had obtained relatively to the action of this substance, by means of numerous experiments on animals as well as by observations at the bed-side. The

effects upon animals are in every respect similar to those observed in the human subject; namely: drowsiness. an indisposition to motion, unsteadiness of gait, dimness of vision, and drooping of the eyelids. An alcoholic solution of morphia produces analogous effects. Hence, when given with sulphate of quinine it increases its action. On the contrary, laurel water counteracts to a certain extent its effects, and may be considered as an antidote. Bleeding is still more efficacious, and digitalis also has appeared to be useful.

Poisoning by bad Meat acting on vessels of Copper.—On the 15th April, 1845, the patients, Sisters of Charity, and officials of the Beaujon Hospital, were suddenly, and nearly simultaneously, seized a few hours after dinner with violent colic, frequent and copious purging of bloody mucus, and painful tenesmus. In many instances the symptoms were extremely severe, and they were obviously due to poison. Soups, vegetables, and meat, and the evacuations of the patients, were accordingly submitted to chemical examination, and were found to contain copper. The mere discovery of this poison, however, was not sufficient; for it appeared that many patients who had partaken of the same food escaped, and the meat was forthwith suspected. One of the sisters, the superintendent of the kitchen, recollected that two kinds of meat had been used—a shoulder and a leg of beef—and that those only who had partaken of the latter suffered. Some of the leg still remained; it was cooked, and again eaten; the same symptoms ensued, and the sister nearly lost her life. Nothing of the kind occurred with the shoulder. It was, therefore, evident that the leg was unsound. It appears that on the day of the accident, the contractor had sent to the hospital a quantity of meat, the cellular tissue of which was infected, and evidently diseased; it was accordingly rejected by the superintendent. The contractor immediately killed an ox, which was reported to have just come off a long journey, and consequently in that febrile state which the butchers technically call *heated;* and the portion of it brought to the hospital still reeking, was also rejected. He then appealed to the central administration, which, without previous inquiry, ordered it to be accepted. This was the cause of the symptoms, the presence of copper being thus explained: Meat of this nature generates a quantity of ammonia, which, in spite of the tinning, attacks the copper; hence the formation of ammonuriet of copper, which passes into the broth,

and is superadded to the deleterious principle of the meat itself.

Mode of Operation of Poisons.—An interesting question connected with the *modus operandi* of poisons has been lately submitted to experiment by M. Andouard, of Beziers, viz: Do poisons, and soluble salts, taken by the mother, reach the body of the fœtus? The following are the conclusions to which we have arrived.

1. Poison and soluble salts reach the fœtus, provided that the death of the mother does not follow instantly on the swallowing of the substance. In this last case, the placenta alone is impregnated with that substance, or, if the fœtus receive it, the quantity is so small as not to be appreciable by analysis.

2. If we have reason to suppose that a pregnant woman has died poisoned, we should not neglect to search for the poison in the placenta, the liquor amnii, and the fœtus.

M. Orfila, in an essay in the Annales d'Hygiéne, devotes himself to the refutation of two errors against which he thinks it necessary to caution those engaged in medico-legal inquiries in cases of poisoning. The first is that of requiring distinct proof that the quantity of poison discovered in the body by analysis is sufficient to destroy life; the second is that we operate more surely if we analyse a small portion of an organ (the liver for instance), than if we employ a larger quantity. It would seem scarcely necessary to occupy upwards of twenty pages in the refutation of two errors so patent as these; but as it has appeared otherwise to this distinguished authority, the subject is here briefly referred to. It must be obvious that if in every case we were to insist on the discovery in the contents of the stomach or the organs of the body of a quantity of poison sufficient to destroy life, many criminals, now justly condemned, would be allowed to escape; and that, on the other hand, if we were to prefer the use of a small portion of the contents of the stomach, or a small fragment of the liver, to a larger quantity of either, we might fail to discover a poison which nevertheless existed in sufficient quantity to be identified by operations on a larger scale. The only case in which operations of a larger scale are to be deprecated is where the reagents we employ are in such quantity as, though apparently pure, to furnish the very poison of which we are in search.

On Copper and Lead naturally contained in the Human Body.—M. Devergie, in a paper which forms a rejoinder to a memoir read at the academy, by MM. Danger and Flandin, in which they call in question the assertion of MM. Hervy and Devergie, that the body naturally contains a certain proportion of copper and lead, confirms his original statement by the results of a new series of experiments, performed in conjunction with M. Boutigny. The following are the conclusions at which he arrives:

1. The stomach, the intestines, and all the organs of the economy furnish, on analysis, traces of copper and lead.

2. The proportion in which these metals are found increases with age. It is small in the new-born infant; it is much more considerable in the adult.

3. A chronic malady, during which the food is greatly diminished, appears singularly to lessen the quantity of copper and lead in the organs of the body.

4. This difference confirms the natural supposition that the source of these metals is the meat and vegetables used as food.

5. In all cases the proportion of copper is greater than that of lead.

The theory that the copper and lead naturally contained in the human body is supplied by the food is strongly supported by the fact that copper has been found in wheat, barley, rye, oats, rice, tea, coffee, sugar, sorrel, chicory, chocolate, gelatin, the flesh of the ox, &c; and that it gives its green color to sorrel, spinach, and gherkins. The use of copper vessels in cookery will also account for the introduction of the metal into the body.

Action of Charcoal on solutions of Metallic Salts.—Chevallier has instituted a series of experiments on this subject, to which his attention was directed in consequence of having to examine wine largely impregnated with lead, but which, after being decolorized by animal charcoal, was found to have lost all trace of the metal. The author in the present communication limits himself to the salts of lead, in respect to which he establishes the following facts:—That vegetable charcoal, unwashed animal charcoal, and animal charcoal washed and purified from carbonates and phosphates, not only, as is well known, form with coloring matters, insoluble precipitates, but unite with metallic oxides, so as to separate them from the acids with which they are combined. Charcoal has this effect on aqueous, acetous, alcoholic, and vinous

solutions of the salts of lead, though vegetable acts more feebly than animal charcoal. This property which charcoal has of separating the metallic oxides from their solutions M. Chevallier thinks has an important medico-legal application; for in many cases medico-legal authorities prescribe the use of animal charcoal as a decolorizing agent of metallic solutions. M. Chevallier's experiments in 1843, in ignorance of the previous reasarches of Graham.—*Ranking's Half-Yearly Abstract.*

The Use of Cold Water in Erysipelas.—The cold affusion is not to be employed in all cases, nor in any without great consideration; for very serious consequences may result from its injudicious adoption. According to my experience, it is when the exanthem exhibits a livid or bluish color; when the affected skin is little swollen, but is dry and is the seat of a burning prickling heat; when the temperature of the body is unequal, the extremities being perhaps cold, while the head is hot; and when the accompanying fever is of a nervous typhoid type, that the cold affusion is sometimes of great service; indeed, the only remedy which holds out any prospect of decided advantage. When this is the case, we observe, after its employment, that the skin becomes more turgescent, that the color of the eruption is more decidedly red than it was before, that the delirium abates, and the tongue is moister —changes, which indicate that the remedy need not be repeated. If, however, the former state of things returns, it will be necessary again to have recourse to the affusion. I have seen another form of erysipelas, in which the cold affusion has been employed with signal advantage: this form prevailed epidemically in the hospital at Zurich in the year 1836. The exanthem did not come out upon the surface fully or regularly; there were only patches scattered here and there; and these appeared for a short while, and then vanished. At the same time, the sensorium was much disturbed. A few of the patients lay in a state of stupor; but in most there was a strange confusion of mind, so that they left their beds, and went about the wards, as if they were going to their ordinary work. Some of them squatted themselves down upon the floor, fancying that they were on the night-stool, or in the water-closet. In most instances, the pulse was but little excited, except towards evening; in some it was below

the natural standard. After the use of the cold affusion, the exanthem came out much more freely, the face became redder and more swollen, and altogether there was a more distinct vascular action than had existed before. In most of the patients, the effects of the douche was of short duration; it required to be repeated in the course of a few hours, and even a third time. There is still another form of the disease in which the remedy has been used with marked benefit. As we saw in our present patient that the erysipelatous affection stood still, and that the skin, under the exfoliating integument, exhibited a new redness, so we not unfrequently have occasion to observe a similar phenomenon in elderly persons, who are affected with a constant erysipelas of the face; the red patches upon the point of the nose or over the zygomatic arch, for example, being surrounded with a red ring, and presenting a shining surface. If in this state the head becomes affected, and if the patient is delirious, has a rapid weak pulse, a dry coated tongue, and the stomach is perhaps irritable to vomiting, I believe that there is no remedy that promises so much benefit as the judicious employment of the cold affusion. The old physicians in such cases recommended an emetic in the first instance, and afterwards the use of camphor and such-like stimulants; but I greatly prefer the above treatment.—*Schoenlein's Clinical Lectures.—Medico-Chirurgical Review.*

Influence of Menstruation upon the Exanthemata.—The appearance of the catamenia, in the course of any of the acute exanthemata, is always to be regarded as an unpleasant symptom. Cases, indeed, occur, where the act of menstruation seems to have a truly critical salutary influence upon the existing fever; the violent pyrexial and the grave nervous symptoms subsiding immediately upon its development. But the very opposite state of things is much more common; and most experienced physicians must have met with cases where the occurrence of this secretion, during the eruptive stage of Measles, for example, has been speedily followed by alarming oppression and anxiety, and perhaps by death. If the case does not prove fatal, the eruption will generally be observed to become more or less livid, and to have petechial spots mixed with it; these spots may be distinguished from the proper exanthem, by not disappearing under the pressure

of the finger. A not unfrequent symptom in such circumstances—and one of the worst augury—is a very fetid odor of the breath, the tongue being at the same time parched, and covered with a dry brown crust. Again, when the catamenia are entirely suppressed, the prognosis must be extrmely unfavorable. It is therefore obvious that the state of this function must influence very materially our opinion as to the danger of exanthematous fevers in menstruating females. Many of the older writers have alluded to the very unfavorable change that is apt to occur in the eruption of small-pox, by the occurrence of menstruation. The pustules are apt to become livid from the admixture of a sanguinolent fluid with their contents, and the large patches of ecchymosis to make their appearance on different parts of the surface. The danger is the greater, if the catamenia occur upon the seventh or eleventh day of the exanthem.* An inexpressible oppression or anxiety is then apt to come over the patient; she feels inwardly assured (a genuine *clairvoyance*) of her approaching dissolution; her pulse becomes exceedingly weak and rapid; her feet cold; and in a few hours, perhaps, death will close the scene, although everything had, shortly before, seemed propitious and favorable.

Dissection in these cases usually discovers an unusual fluidity of the blood, and—a common consequence of this morbid state—a dark-red coloring of the inner surface of the bloodvessels; such as we frequently observe in cases of death from lightning. This appearance has been erroneously attributed to inflammation; whereas it is the mere result of imbibition or Endosmosis of the vascular parietes.—*Ibid.*

Intermittent character of certain diseases of the Nervous System.—The tendency to intermittence of the symptoms, in various lesions of the cerebro-spinal system, is a circumstance that ought to be well known to medical practitioners; as they might readily fall into a serious error in their diagnosis, if they were not aware of it. In the acute hydrocephalus of children, the symptoms in the early stage of the disease very usually exhibit more or less of intermittence. I have

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* In a case of Scarlatina, related in these reports, Schoenlein advises medical men never to give a confident favorable prognosis in this disease, until the eleventh day is past.

repeatedly noticed this circumstance in the genuine disease—not to mention that form of fever which has been called *intermittens maligna cerebralis*, and which has been so often mistaken for it. In the after-part of the day, the symptoms, cerebral irritation, usually come on, and continue till about midnight; then they gradually subside, and the child appears to be almost quite well, so that its parents may probably suppose that it was nothing but a casual illness. Again, however, in the afternoon, the child becomes feverish and uneasy; and the same aggravation and subsidence of the symptoms occur as on the preceding day. This state of things will, if unchecked, continue until the pyrexia and head-distress become permanent. When such is the case, mischief has already fairly commenced, and will perhaps utterly defy the best directed efforts of the most experienced physician. In inflammatory affections of the spinal marrow also, this intermittence of symptoms is not unfrequently observed in the early stages of the morbid action.—*Ibid.*

Issues on the Scalp in Chronic Cerebral Diseases.—The establishment of a caustic drain on the scalp over the suspected seat of the lesion, in cases of chronic cerebral disease, has proved in many hands a remedy of decided utility. I remember the case of a woman who suffered the most agonizing pain, notwithstanding the use of the most powerful narcotics, in consequence of the carious destruction of the petrous portion of the left temporal bone: the patient was much emaciated, and was affected with hectic fever. A potential cautery was applied over the squamous plate of the bone. As soon as the cauterized skin began to discharge, the relief was most gratifying; and the progress of the fatal event was very materially retarded. Women, who have, at some former period of life, suffered from a chronic irritation of the cerebral meninges, are apt to be affected, as life advances, with a most severe pain on the crown of the head, either along the course of the sagittal suture or a little to one side (usually to the right) of it. When such a case proves fatal, the cerebral meninges are generally found to be thickened and agglutinated together, and the glandulæ Pacchioni to be enlarged; this increase of size being sometimes so great as to have caused a considerable absorption of the bone over them. In such cases, all opiates and anti-spasmodics are utterly

useless, and perhaps decidedly injurious: the only safe and judicious remedies are repeated local bleedings, and the establishment of an issue over the seat of the lesion.

For exciting the irritability of paralysed muscles, the most important of all remedies is unquestionably *electro-Magnetism.* I have seen many remarkable cures effected by its use. Not a few cases of paralysis of the generative organs have been speedily and effectually benefited by it. *Strychnine*, also, will be found to have very remarkable powers in curing certain forms of paralytic weakness. Its employment requires much discrimination and judgment; for, if administered too early, before the cerebral lesion has been very materially modified, mischief, and not benefit, will be the result. The same remark is applicable to the use of electricity.—*Ibid.*

Syphilis.—M. Cullerier has lately performed a series of experiments in order to determine the inoccubility of the lower animals, with the syphilitic poison. The result of repeated trials upon monkeys, Guinea-pigs, &c., appears to be that the disease in question is confined to the human race, as in no instance was the experimenter enabled to communicate the disease.—*Half-Yearly Abstract.*

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PENNSYLVANIA HOSPITAL.

Our correspondent from Philadelphia writing of the Pennsylvania Hospital gives the following details which may be of interest to our readers.

Besides the regular inmates of the wards, a number of indigent persons daily present themselves for the purpose of having their diseases investigated and prescribed for, which at this season is done in the hall of the first building; during the sessions of the medical schools, if any interesting cases are presented they are brought before the students in a room appropriated to that purpose. Among those on Saturday, I saw a case of Carcinoma, originally affecting the lower lip near the right angle of the mouth, but extending now along the inner margin of the right side of the lower jaw, exposing in its ravages over this surface the sublingual salivary glands, and causing a constant flow of saliva through the opening. Commencing at the lower part of the ear, on the same side, and extending the whole length of the parotid gland, exposing also this body, is another ulcer. The patient is a native of Ireland, 55 years of age; two years ago he observed a small wart upon his lower lip, which,

together with a portion of the lip, was removed by some surgeon near Dublin; soon afterwards he sailed for this country and had hardly reached here before the disease reappeared a little to the right of its original seat. Of course, nothing was done for the miserable man, and as he walked out of the hospital he looked the picture of despair.

In the wards were a great number of fractures, particularly of the lower extremities. Many of these cases were in the persons of seamen, who met with the accidents some weeks ago while at sea during those severe gales of which you have seen an account. Most of these were difficult and aggravated cases, some of them of long standing, from having, as I said, occurred at sea where the men had not the advantage of surgical attendance.

I saw also several cases of opacity of the cornea, two or three of which supervened upon attacks of small-pox. The treatment, by leeches, nitrate of silver, and sulphate of copper, was affording decided benefit. I cannot forbear to speak of the kindness of manner and sympathy manifested by Dr. Norris, at present the attending physician, towards all the patients.

In the afternoon I visited the Anatomical Museum belonging to the University. This museum, being supported by annual appropriations made by the trustees, presents an air of great cleanliness and neatness. The alcohol contained in the thousand jars is removed every summer if at all discolored, fresh liquor supplied, the jars again covered with their six layers of cloth, varnished, labelled, and set away in their places. All the dried preparations are attended to with equal care, and by timely labor the ravages of the worms are prevented. The untiring industry and great skill of Professor Horner are seen in the large number, rareness and beauty of the specimens, preparations, and dissections. In one of the cases are to be seen casts in plaster of Paris of two limbs of persons who had anchylosed knee joints, taken both before and after the operation for that deformity, which consists in making the V excision, first proposed, I believe, by Dr. Barton. The casts taken before the operation show limbs distorted and wholly useless—those after, limbs improved in symmetry, and not less so in usefulness.

I have thought that a brief notice of the operation not long since performed by Dr. J. K. Rodgers for aneurism of the subclavian ar-

tery, of which you have seen notices in the New York journals, might not be uninteresting to you.

The subject of this operation, a man aged 35 years, was admitted into the New York Hospital in December, 1845, with aneurism of the subclavian artery of the left side. Dr. Rodgers applied a ligature just inside of the scalenus anticus muscle; pulsation ceased immediately, and the ligature came away on the thirteenth day, when a slight hemorrhage began, and persisted until the patient died on the fifteenth day after the operation.

The following are the appearances presented by the post-mortem examination: the tumor was found perfectly consolidated, as was also the artery from the ligature to the aorta; there was more than an inch of firm coagulum between the ligature and the heart; the axillary artery leading from the tumor was filled with a finely organized fibrinous clot, which adhered closely to the parietes of the vessel. The hemorrhage which caused the fatal termination appears to have proceeded from the vertebral artery, which was just on the distal side of the ligature.

The fine coagulum formed in the subclavian on its proximal side, of course, would have prevented secondary hemorrhage.

This case to my mind clearly demonstrates the feasibility of the operation in question, for had the vertebral artery been tied along with the subclavian, which Dr. Rodgers would have done had not that artery been unusually deep-seated, the patient would almost without doubt have recovered.

The specimen exhibiting all the appearances that I have just described is in the hospital museum where, after having had a history of the case from my friend, Dr. Sayre, I noted down nearly all that I have written. It is one of those cases in which the surgical world at present feels an especial interest; and certainly, I think, authorizes the hope that by the operation proposed—the application of a ligature to the vertebral and subclavian arteries at the same time—the left subclavian may in many instances be successfully ligatured.

D. W. Y.

March 29th, 1846.

FRANKLIN MEDICAL COLLEGE OF PHILADELPHIA.

Students who may repair to Philadelphia in the coming autumn will find there four medical schools between which to choose. The Franklin Medical College takes its place in that honored sisterhood, to do service in the cause of medical education, and compete for its share of pupils and renown. At first, the impression made upon the mind by the annunciation that a *fourth* school has been opened in Philadelphia, is, that our brethren in the city of brotherly love are over-doing the thing, and that some of these new enterprises must prove a failure. Such, for a long time, was the impression in respect to the Jefferson Medical College; but after years of hard toil, many changes of professors, and many reverses, it has at last fixed itself firmly in public confidence, and now vies in the number of its pupils with its ancient rival, the University. In the meantime a third school, the Pennsylvania Medical College, was set on foot, and seems to be enjoying a satisfactory amount of success. And still the *old* School, the University, is as prosperous as ever. For nearly twenty years before the Jefferson Medical College was chartered, the classes at the University amounted to more than four hundred; but very seldom were they larger than the class which rewarded the labors of the professors during the season which has just closed. The effect, therefore, of the multiplication of schools in Philadelphia has been to attract students in still increasing numbers to that city, and not to cripple those first established. So long as this continues to be the case there can be no objection to an increase. Beyond a certain number it is not desirable that students should congregate in rooms where much of the teaching must be demonstrative. When that number is exceeded, hearing becomes very uncertain, and seeing quite impossible.

But on the other hand, in the present rage for creating medical schools it is very probable that many will be started which cannot for a long time attract such classes as will make it an object with men of talents and learning to hold places in them. The effect of this upon the character of the profession is easily foreseen. As it is for the benefit of students that the rooms be not too much crowded, so is it equally essential to teachers that they have something more before them than empty benches. But empty benches must be the allotment of some, if the present rate of increase should continue.

We do not believe, however, that this will be the share of our friends of the Franklin Medical College. A number of them are already known to fame; some of them have enjoyed experience as teachers, and their success cannot be looked upon as doubtful. We subjoin a list of their names and professorships.

Paul Beck Goddard, M.D., Anatomy and Histology.

C. C. Van Wyck, M.D., Principles and Practice of Surgery.

Meredith Clymer, M.D., Principles and Practice of Medicine.

John Barclay Biddle, M.D., Materia Medica and Therapeutics.

David Hunter Tucker, M.D , Obstetrics and Diseases of Women and Children.

Levin S. Joynes, M.D., Physiology and Legal Medicine.

James B. Rogers, M.D., General and Organic Chemistry.

Demonstrator of Anatomy, Joseph Leidy, M.D.

MEDICAL COLLEGE OF MEMPHIS.

From the Memphis newspapers we learn that the projected medical college of that city is getting under way. The trustees have made the following appointments: J. M. Bybee, M.D., to be professor of Anatomy; D. J. M. Doyle, M.D., professor of Surgery; A. Hopton, M.D., professor of Chemistry and Pharmacy; G. R. Grant, M.D., professor of Theory and Practice. The board advertise for professors to take the chairs of Institutes and Medical Jurisprudence, Materia Medica, and Obstetrics; application to be made to the Secretary of the Board before the third day of July. It is promised that "the names of the successful candidates only will be made public."

UNIVERSITY OF MARYLAND.

We have received the annual catalogue of students who attended lectures in the medical department of this institution during the last winter, from which we learn that the number was 147. From the circular appended, it appears that the fees for tickets have been reduced from twenty dollars to fifteen, and as the number of profes-

sors is but six the total of expences for the lectures is but ninety dollars. It is announced, in a note, that Dr. Power, having received the appointment of Lecturer on the Theory and Practice of Medicine, will discharge the duties of that chair until Professor Bartlett, who is now in Europe, returns. Are we to understand from this that Professor Bartlett is expected to return to the school in Baltimore? Is he to be professor at the same time in the University of Maryland and Transylvania University?

THE MEDICAL PROFESSION OF THE UNITED STATES.

It must be admitted that we, the physicians of the United States, are very much dissatisfied with ourselves. On all sides we hear complaints of the state of the profession—of defects in medical schools and in primary education—of the progress of quackery, and the necessity for a higher standard in medicine. No one, we believe, has gone quite so far in depreciating his profession as Dr. J. N. Davis, the projector of the New York Medical Convention. In the Circular, of which he is the author, addressed to the medical societies and colleges of the country, he holds the following language. We find it quoted by Professor Paine in his Valedictory Lecture. It so happens that we did not read the Circular, and this must be our apology to our brethren for not vindicating them from such aspersions. The quotation runs as follows:

"There may, indeed, be found here and there, a mind, so endowed by nature, that despite of all the contracting and evil influences of such a system, will rise superior to every obstacle, and shaking off one embarrassment after another, will roam over, and revel in, all the fields of science untrammeled and free. And it is such that constitute the ornament and honor of our profession.

"But far otherwise is it with the great mass; the ninety nine out of every hundred With no practical knowledge of chemistry and botany; with but a smattering of anatomy and physiology, hastily caught during a sixteen weeks' attendance on the anatomical theatre of a medical college; with still less of real pathology; they enter the profession, having mastered just enough of the details of practice to give them the requisite self-assurance for commanding the confidence of the public; but without either an adequate fund of knowledge, or that degree of mental discipline, and habits of patient study, which will enable them ever to supply their defects.

Hence they plod on through life, with a fixed routine of practice, consisting of calomel, antimony, opium, and the lancet, almost as empyrically applied as is cayenne pepper, lobelia, and steam, by another class of men. And how can this ever be otherwise, while medical students, without regard to their previous qualifications, are shut up three years in the office of a country or village physician, sent out to one or two courses of lectures, and then honored with the title of M.D.? Indeed so radical are the defects in our present system of medical education, and so glaring are their effects on the condition and usefulness of the profession, that no observing man will charge us with exaggeration in the foregoing statements."

If a copy of Professor Paine's lecture has been sent to us we have been so unfortunate as not to receive it, and it was only a few days since that we had the pleasure of meeting with it on the table of a friend. From the title-page we perceive that in the short space of one month the lecture has reached the *sixth* edition. The reader will not be surprised to hear of this unusual popularity, when he is told that the lecture is a "defence of the medical profession in the United States" against these charges. Dr. Paine has long maintained that as practitioners, American physicians are the best in the world. He is sensible to defects which exist; he admits that much may be done towards correcting them by wise concert of action; but he is naturally indignant at such accusations as those of which specimens are given in the paragraphs above quoted. His defence is a manly one, and we wish it could be read by every physician in the United States. We are glad to learn that it has already attracted so much attention, and hope the interest it has awakened will not soon subside.

On one point Professor Paine is eminently successful;—he shows conclusively, that the author of the Circular is not himself a scholar. But we are not able to perceive that he helps his argument for the American profession, by proving that a member who sets up to be one of its leaders is not able to spell his own language. Such proof may be very unfortunate for the projector of the convention, but it cannot be said to reflect much credit upon the profession, "the standard" of which he professes such a solicitude to raise. In an evil hour, this gentleman addressed the Circular calling the Convention to the Faculty of the New York University, and Dr. Paine publishes it to the world as it was written. Here it is.

"The above Circular," says the Chairman, "is an Extract from

the proceedings of the New York State Medical Society at its last *anual* meeting in Feb., 1845. The object of the proposed convention is sufficiently indicated in the preamble and resolutions itself. The Committee, in the discharge of their duty, have corresponded with the Medical Societies and Colleges in all the States where such institutions exist, and the replies which have been received are *unanymously* in favor of the proposed convention.

"Indeed, several Colleges have already appointed delegates; consequently, there is no longer any doubt but that a convention *will be held.* If the subject has not already been before the Faculty of the Medical Department of the University, will you not, without further delay, bring it to their *notise?*

"(Signed,) J. N. DAVIS."

The italics are Dr. Paine's; the spelling is Dr. Davis's own. The extracts need no comments. One, as he reads them, can hardly help recalling to mind the wise caution given to dwellers in "glass houses;" but, alas, how seldom is vouchsafed to us the inestimable "gift" of "seeing ourselves as others see us!"

A CORRECTION.

We take great pleasure in complying with the request of the publishers of Ellis's Medical Formulary, Messrs. Lea & Blanchard, to insert the following correction of a serious error in that work, and beg leave to call the attention of our readers to it.

"*Ellis's Medical Formulary.—Correction.*—The publishers of this work respectfully request those persons who have the seventh edition, to correct a typographical error for the "*Medicated Hydrocyanate of Potassium,*" at page 83; wherein the symbol for an ounce is used in place of that for a drachm. The following is the correct prescription, and corresponds with the proportions directed in all the previous editions of the work:

℞ Potassii hydrocyanici medicati, ʒj.
Aquæ destillatæ, Oj.
Sacchari purificati, ℥iss.

Fiat solutio.—Dose, a table-spoonful, night and morning.

THE NATIONAL CONVENTION.

From all the indications of the day it is now pretty evident, that the proposed medical convention in New York will not be *national.* We have stated heretofore, that the University of Pennsylvania and the Medical Institute of Louisville will not be represented in it.—We learn that the Ohio Medical College, and the St. Louis and Boston medical schools also decline sending delegates. From the tone of Professor Paine's valedictory lecture it is quite certain the University of New York will not take part in it. All this is to be regretted. A convention in the right spirit, national in feeling and aim, composed of representatives from every part of the country, would be felt in its elevating influences by the profession in all the length and breadth of the land. But we begin to doubt whether the eyes of any now living will ever be gladdened by the sight of such a convention.

VOYAGE OF A NATURALIST.

We recommend to all who have a taste for natural history two neat little volumes, from the press of the Harpers, under the above title; they are from the pen of CHARLES DARWIN, M.A., F.R.S., and are among the most engaging that we have ever read. Every physician needs occasionally to turn away from his professional studies, and for the warm season which is approaching we do not know a book that would constitute a more delightful or instructive companion than the *Voyage of a Naturalist.* It abounds in details of singular interest, touching geology, botany, and every department of zoology. The publishers have brought all American fathers under obligations, by adding these volumes to the stock of our literature; eminently adapted as they are to inspire the young with a taste for reading, and for the study of natural history.

FACTS FROM CORRESPONDENTS.

A CASE OF ILEUS RELIEVED BY TOBACCO.

By T. W. Fry, M.D., of Crawfordsville, Indiana.

Mrs. Winters, 69 years of age, suffered from a severe attack of intermittent fever last fall, and continued delicate and feeble through the winter. On the 16th of March she was seized with symptoms of colic, accompanied by constaut efforts at vomiting. A potion of tinct. opii and sulph. ether gave but temporary relief. On the morning of the 17th vomiting returned, and some bilious matter was thrown up; an emetic of ipecacuanha was now ordered, which relieved the stomach of a large quantity of bile. The sickness and pain having subsided to some extent, cathartic medicines, followed by saline mixtures, were had recourse to, but without any good effect. The pain returning with greater violence, the bowels becoming more swollen, accompanied by copious and frequent discharges of feculent matter from the mouth, now indicated more clearly the nature of the difficulty; and as all medicine taken into the stomach for the purpose of acting on the bowels only increased the sickness, pain, and vomiting, reliance was placed entirely upon opiates and injections. Tinct. opii 30 drops was given, followed in fifteen minutes by one-fourth of a grain of sulph. morphine; injections of salt water and castor oil frequently repeated, were immediately expelled without producing any action on the bowels, except one small discharge of opaque mucus. An injection of tobacco was now given with the same result. The bowels seeming incapable of retaining fluid matter, a suppository made in the following manner, was introduced into the rectum: a drachm of strong tobacco steeped in a gill of hot water was added to two tablespoonsful of sugar, and boiled to the consistence of wax. This was retained several hours, and the patient beginning to feel an inclination to stool, another injection was administered, which came away with a copious discharge from the bowels, and entire relief to the patient.

The discharge of feculent matter by the mouth, which continued up to the time of the introduction of the suppository, now ceased, and the patient, although prostrated to an alarming extent, her constitution being

much impaired by age, recovered with great rapidity. Counter-irritation on the abdomen was kept up through the whole course of the disease by means of hot salt and mustard alternately applied.

The progress of this case, and of one terminating fatally which came under my observation last spring, convinces me that aperients in severe cases of ileus are only productive of evil.

March 27th, 1846.

A CASE OF HEMOPTYSIS AND MENORRHAGIA SUCCESSFULLY TREATED BY TARTRATE OF IRON.

By D. E. Harrison, M.D., of Garrard county, Ky.

Mrs. King, æt. 40 years, of feeble constitution, the mother of eight children, the youngest of which being two years old, was attacked suddenly on the 16th of November last with spitting of blood, and in a few hours discharged what was supposed to amount to half a gallon. I found her on the same day pale, insensible, pulseless at the wrist, breathing quick, and with cold extremities. No abnormal sounds could be detected on percussion in any part of the lungs. Stimulants and astringents having been administered. the hemorrhage soon ceased, and the patient regained her consciousness. On inquiring into the history of her case I was informed that she had been subject to hemoptysis during the long period of fifteen years, the hemorrhage being very much increased at her catamenial terms; and I was also told that the complaint was hereditary. Her health had suffered seriously by the drain, as well, probably, as by the long-continued use of medicines prescribed for its suppression. The uterine discharge, it was stated, consisted of blood which coagulated like that from the lungs.

Having just read the lectures of Dr. Buck published in the Western Journal, I was encouraged to try chalybeates and a nourishing diet, with a view to the improvement of the quality of her blood. Accordingly I put her upon the use of tartrate of iron, in doses of 8 grains gradually increased to 12 grains, three times daily, in pills combined with a little rhubarb so as to keep the bowels soluble. The improvement in her case was speedily manifest. Her complexion became healthful; her strength increased daily; she had no return of the pulmonary hemorrhage: her menses became regular, and on the 15th of the present month I ceased to attend her, considering her cured.

March 23d, 1846.

CONVULSIONS FROM DYSENTERY AND INTERMITTENT FEVER.

On the 7th of April, about 4 o'clock in the afternoon, a practitioner of this city was called, in quick succession, to a child two years of age, and a boy aged ten years, both of whom had been seized with convulsions about the same moment. A storm of wind and rain had prevailed during the day. The convulsions in the child were violent, and were followed by dysenteric symptoms which persisted for several days. In the boy the system was less convulsed, and he remained comatose for more than an hour—in fact, until relieved by venesection, which restored him to consciousness. The pupils of his eyes were much dilated, and his pulse was intermittent. During the autumn he had suffered with chills and fever, and they had recurred once or twice in the course of the winter. At this time the attack had been preceded by a cold, with pleuritic symptoms. Calomel and ipecac. were administered, after the venesection; his side was blistered, and on the subsidence of fever quinine was given. Two days after the convulsion a febrile paroxysm occurred, during which the pain in his side and head was much increased, and his cough was almost incessant. By the employment of quinine other paroxysms were obviated, and he had a rapid convalescence.

In the few days of this boy's illness, his father, mother, and grandmother had each a chill. In the fall as many as seven of the family, or about half, sometimes suffered with the chills on the same day. Quinine was found effectual in arresting the disease for the time; but on slight exposure it returned. Iron was the remedy indicated under such circumstances.

TINCTURE OF IODINE IN THE TREATMENT OF PORRIGO.

Dr. F. W. Todd, of Port Gibson, Miss., informs us that he has found the *Tincture of Iodine*, employed locally, "invaluable in the treatment of that obstinate disease, Porrigo." He has used it in all forms of the disease whether mild or severe, and in no instance has it failed to effect a cure. In the more active forms, poultices and fomentations preceded the application of the iodine.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

JUNE, 1846.

ART. I.—*An Essay on Diet in Health and Disease.* By JOHN DAWSON, M. D., of Jamestown, Ohio.

[CONCLUDED.]

THE DIET IN URINARY CONCRETIONS.

Incident to the performance of their functions, the urinary organs are liable to diseases that are sometimes produced by, and are always more or less under the control of, the food. Among the disorders affecting this apparatus, and the only ones to which we intend to allude, are *urinary concretions.* It is but a few years since Scheele took the first successful step towards the elucidation of this subject. Yet notwithstanding this, his labors in conjunction with those of Wollasten, Pierson, Fourcroy, Vauquelin, Henry, Brande, Prout, Marcet, and Bird, have enriched this field with many new discoveries, and rendered it among the most interesting de-

partments of medical research. The composition of healthy urine has been so accurately determined, that alterations taking place in it from any cause whatever can be very readily and certainly ascertained. Of only some of these, and the conditions of the general system that attend them, is it our present purpose to speak in connexion with the food proper for their correction.

Lithic or Uric Acid Diathesis.—In a healthy condition of the organism, it is known that the urine always exhibits acid properties, turning litmus paper red, &c. This, according to Prout, who is high authority on everything connected with diseases of the urinary organs, is not because the fluid contains a free acid, but because the alkaline and earthy bases are not neutralized, but exist in the state of super-salts. The acid properties then depend upon the presence, in the urine, of lithic or uric acid in commbination with ammonia, giving rise to the supersalt called lithate of ammonia. Pure lithic acid is nearly insoluble, and hence, when the ammonia with which it is combined comes in contact with any other acid for which it has a stronger affinity than for the lithic, this latter is precipitated in the form of what is generally known as the lateritious sediment, the particles of which concreting together form gravel, or calculi. To the condition of the system giving rise to this kind of deposit, pathologists attach the name of lithic diathesis. A confirmed diathesis is necessary in order to the production of gravel, which sometimes takes place by accretions in the kidneys, at other times in the bladder.

Nearly always, there is associated with this diathesis a broken down, disordered condition of the digestive functions arising from intemperance, habits of debauche, or gluttony. This state of things disorders all the emunctories more or less, but the kidneys are predominantly affected; and as a consequence elements make their appearance in the urine not proper to this fluid, and which in a normal condition of the system would seek egress in a different direction. Concern-

ing, however, the proximate cause, if it might be so termed, of the urinary deposit under consideration there has been of late much interest manifested, and as a consequence several theories in relation to the subject have been proposed.

Liebig supposes that when from any cause a portion of any tissue becomes unfit for use, or for the performance of its functions, its elements, under the influence of the oxygen conveyed to it in arterial blood, become re-arranged in such manner as to give rise among other compounds to uric acid. More or less of this becomes converted into urea and carbonic acid, the former escaping by the kidneys, the latter from the pulmonary and cutaneous surfaces. Where the circulation is rapid, respiration perfect, and consequently a good amount of oxygen introduced into the system, the change is complete. There is then no excess of uric acid, relatively to the urea, developed. But when these functions are at fault, respiration and circulation being sluggish, the presence of abnormal proportions of uric acid are found in the urine as a deposit. If these views be correct, the presence of uric acid in the kidneys depends upon the imperfect introduction of oxygen into the system. Uric acid, Liebig tells us, disappears in the urine when there is received through the skin and lungs a quantity of oxygen sufficient to oxidize the products of the transformed tissues.

According to Liebig there ought to be an excess of uric acid in the urine of all those animals where there appears to be naturally a slow, imperfect condition of the functions of respiration or circulation; and also in all the diseases where these functions are prominently at fault. So far as some animals are concerned the doctrine holds good. Serpents with a sluggish condition of the respiration and circulation have so much uric acid present in the urine as to render it nearly solid. An opposite condition of the urine is present in carnivorous mammalia, where these functions are more perfect. But how on this hypothesis can the fact be explained, that some birds that have a circulation, respiration, and animal heat superior to man, have so much urate of ammonia in their

urine as to render it semi-solid? I allude to those marine birds inhabiting parts of South America, and which cover certain localities completely over with discharges of urate of ammonia, known in commerce as a valuable manure under the name of '*guano.*' Again, according to the same author, we should have the uric acid deposited in all diseases in which the circulation and respiration are below the healthy standard. Becquerel's observations do not confirm such a position. He found in chlorosis the ratio of urea to uric acid equals, and sometimes exceeds, the healthy proportion.—Bird also states that in pulmonary emphysema, in which only an imperfect arterialization of the blood can take place, as is evinced by the blue lips, cold extremities, &c., there is less uric acid found in the urine than in health. Passing to an opposite class of cases, in which, from the more perfect oxidation of the blood caused by the rapid circulation and respiration, there should, if the doctrine under consideration is correct, be a deficiency of uric acid, and an abnormal proportion of urea. Take, for example, phthisis pulmonalis where in the opinion of Liebig the patient is oxidized to death, and what do we find to be the case? Bird assures us that the quantity of uric acid is greater than in health, and the relative proportions of urea less, which is precisely the reverse of what Liebig's theory requires.

Taking it as a well established fact that uric acid exists in the urine in combination with ammonia, Bird supposes that any change occurring which removes the ammonia must necessarily be attended with a deposit of the insoluble acid. By the researches of Prout two acids have been proved to exist in the body, in the free state,—the lactic and the muriatic. They are both found in the stomach, and the lactic is known to be excreted at the cutaneous surface. Now anything interfering with the assimilative functions, or with the action of the emunctories would, as a consequence, derange the excretion of these acids, and compel them, perhaps, to seek an outlet by the kidneys, where, by combining with the ammonia of the urate, they would cause the precipitation

of lithic acid in the free state, and thus become a primary cause of gravel.

The opinion of Prout concerning the cause of the deposit under consideration differs but little from that of Bird. Both of these authors, eminent in the literature of diseases of the urinary organs, regard the lithic acid deposit as the result of primary disease, functional and structural, in the assimilative organs attended with a deranged condition of the excretions.

Seguin's experiments on cutaneous transpiration show conclusively that the exhalation from the skin is very much under the influence of the stomach. This author found that the exhalation is always less abundant after taking food; and when the digestive functions are impaired it is sensibly lessened, thus establishing indirectly the opinions of Bird and Prout, that compounds which in health are excreted at the cutaneous surface, are, when the assimilative functions are at fault, either retained in the circulation, or removed by the vicarious office of the kidneys.

With respect to the treatment of the lithic diathesis, all know that it is impossible to dispense with a certain kind of drugs, namely, alkalies. Next, however, in point of importance is the proper selection and regulation of food. Every author of any eminence acknowledges the correctness of this position. Even Liebig, who regards this kind of urinary accretion as the result of derangement of what is sometimes called the secondary destructive assimilation, the re-union of the effete parts of the tissues with the blood, looks upon the proper regulation of diet as an indispensable part of the treatment.

In prescribing food for a person laboring under this diathesis, the objects in view should be, to restore the digestive functions to a healthy condition, and to obviate, as far as possible, the tendency to the formation of free lithic acid. In fulfilling the first indication, the quantity, quality, &c., of the food should be strictly regarded. Where the trouble has ori-

ginated from excess of food or high living, which according to all observers is frequently the case, the quantity, of course, should be reduced. As Abernethy says, the supplies should be cut off in order that the enemy may vacate the citadel. Too much food at even a single meal gives rise to what is called the *urina cibi*, which deposits uric acid more copiously than either of the kinds called *urina chyli* or *urina sanguinis.* The quantity, therefore, whatever may be the condition of the stomach, must be regulated by the ability which this organ possesses to digest it. Unless completely digested the smallest quantity operates as an exciting cause of the complaint; while on the contrary a quantity that might be considered liberal, may, by invigorating the general powers of the system, operate indirectly as a means of correcting the diathesis.

If it be taken as an established fact that the urine frequently exhibits the physical and chemical properties of the food, there can be left no doubt upon the mind of any, that the quality of the food in the disease before us is entitled to a careful consideration. While all who have any claims to a critical knowledge of urinary deposits, freely admit the truth of the above statement, it is to be regretted that there is not that entire unanimity of opinion in relation to the qualities most available in the treatment, that could be desired. All who favor the opinions of Liebig contend that non-nitrogenized articles, such as those containing large proportions of starch, fat, butter, and sugar, (elements as they suppose of respiration), by combining with the oxygen of the inspired air prevent that peculiar kind of metamorphosis from going on in the tissues that opposes the formation of free uric acid.—These articles, however, are objected to by those who differ with Liebig from other considerations. It is thought by Prout, Bird, and others, that they are contraindicated from the facility with which most of them are first converted into sugar and afterwards into acids. It is with respect to the propriety of food rich in nitrogen that Liebig and Prout are especially at issue. The former says that there are no rea-

sons which support the opinion that nitrogenized food has any influence in the formation of urinary calculi; while the latter assures us that imperfectly assimilated azotised food is often eliminated by the kidneys as urate of ammonia. Bird coincides with Prout on this point, and says, if the ill-digested meal is composed of food rich in nitrogen, as meat or fish, more uric acid, *cæteris paribus*, appears in the urine than if highly carbonized ingredients, as bread, potatoes, &c., had been used. Future experiments must settle this matter in dispute between these illustrious philosophers. In the meantime Prout, from his very accurate knowledge of the subject in general, we should be disposed to take as our guide. To articles of diet or drink containing acids in anything like excess there is pretty general objection. According to all observations they favor the precipitation of the uric acid, and as a consequence are contraindicated. In anything like a good condition of the stomach there is reason to believe that the vegetable acids are digested. But this, in the lithic diathesis, is so seldom the case that they are regarded as a very fruitful source of embarrassment. With respect to the propriety of adopting the most digestible quality of food, there is no diversity of opinion. This is a general rule, without the observance of which, no patient can be benefitted by any plan of treatment.

Phosphatic Diathesis.—This state of the system differs widely from that of the lithic diathesis. It is the very opposite, for here the urine is alkaline. Both conditions agree in owing their origin to a faulty condition of the functions of assimilation. On this account it will be unnecessary to do any thing more than merely to advert to the morbid state of the digestive organs, and to the concomitant phenomena that are usually present; for, so far as we know, there are no peculiarities by which the predisposing mischief in the two diatheses can be distinguished.

According to Bird 6·5 grains of phosporic acid leave the system in the urine every 24 hours. The particular state in

which this acid exists is a matter of doubt. A considerable portion of it is present in combination with lime, magnesia, and ammonia, forming a double salt, the ammonio-phosphate of magnesia, or triple salt, as it is usually called. These salts, it is supposed, are held in solution in healthy urine by the free acid always present. If, now from any cause the acid falls below the proportion necessary to keep them in a soluble condition, the earthy phosphates are deposited in the urine in the form of a white gravel, occasionally grey; sometimes amorphous, at other times crystalline, and composed generally of phosphoric acid, ammonia and magnesia; sometimes of phosphoric acid and lime. Prout gives an explanation of the pathological chemistry by which the calculous concretion under consideration is formed, that is somewhat different from this. The phosphate of magnesia it is known is contained in healthy urine, and because of its being very soluble is dissolved in that fluid. Under certain circumstances, however, the urea of the urine becomes decomposed in the kidneys and ammonia is extricated, which, combining with the phosphate of magnesia, forms an insoluble compound, the phosphate of ammonia and magnesia. Usually the urine is pale, but when the phosphates are very abundant it becomes turbid; is of low specific gravity; smells differently from healthy urine; is sometimes sufficiently alkaline when voided to turn turmeric paper brown; and becomes after standing awhile putrid, and highly offensive. The more decided and intense the diathesis the more these characters are developed.

To insist on the utility of regimen in this affection is unnecessary. Much of what we have said in relation to the quantity, &c., of the food in the lithic diathesis is applicable here. No medicine, not even nitric or muriatic acid, the main articles relied upon in the treatment, is of any avail unless such measures are adopted as are calculated to give tone and energy to the organs of assimilation. The use of a diet properly regulated is the only foundation upon which any reasonable hope of cure can be predicated. Depressed by the debility resulting from mischief in the blood-making ap-

paratus, the organism is unable to assist the play of affinities by which this accretion takes place, and the only chance of successfully overcoming it, is by removing the cause. By the adoption of a generous diet, and such other hygienic measures as will economise the resources of the system, the object may be accomplished. Articles in this diathesis containing an excess of some of the vegetable acids are by no means contraindicated. On the contrary they may be of some service in overcoming the alkaline state of the urine. From the acknowledged efficacy of opium in rendering alkaline urine acid there is good reason to believe that alliaceous vegetables, if rightly prepared, might prove to be a very valuable kind of diet in this form of urinary disease. Of course, they should be well cooked to deprive them of the acrid volatile oil which they contain.

Concerning the animal aliments best adapted to this affection, we have no diversity of opinion. All agree that the most digestible and nutritious are to be preferred. Mutton, which according to the analysis of Brande contains a greater amount of nutritious matter than the other kinds of flesh in common use, is on this account, where it is in consonance with the feelings of the patient, well calculated to promote the object in view. The flesh of the common chicken, from its nutritive and digestible qualities, is also a very valuable article. For drinks, water made sour with acid wines (claret or hock), or with the aurantaceous fruits, will answer a better purpose than the common beverages, tea and coffee. But although drinks subserve so many purposes in the animal economy, it should nevertheless always be recollected, that they dilute the gastric juice, and if taken too freely impair thus the process of chymification.

Oxalic Diathesis.—This is that condition of the system in which there is a tendency in the kidneys to the formation of oxalate of lime, or what is usually called the *mulberry calculus.* The phenomena attending it, and, to a certain extent, indicating it, do not differ materially, so far as the general

system is concerned, from what are present in other kinds of calculi. Here also patients are dyspeptic, emaciated, nervous, hypochondriacal, irritable in temper, at times very excitable, deficient in sexual power, and most commonly afflicted with a sense of weight or pain across the loins. The skin, according to Prout, in cases where the diathesis is strongly marked, assumes a dull greenish yellow, or dark olive color. The urine is strikingly characterized by its bright clear appearance, and by being entirely free from deposits, the oxalate being diffused through it in a crystalline form. In addition to the oxalate of lime, the urine, in one-third of all the cases that came under Bird's observation, contained urates in large excess, and in some instances phosphates.

From the fact that most of the symptoms are common also to diabetes mellitus, and from the known facility with which sugar and its chemical allies, starch, gum, and wood fibre, under the influence of oxidising agents, are converted into oxalic acid, Prout came to the conclusion that the oxalate of lime owes its origin to the transmutation of sugar. In his work on physiological and pathological chemistry, Liebig traces the source of oxalic acid not to any changes made upon sugar, but to the oxidation of uric acid. "In France," he tells us, "it is a common occurrence among patients suffering from calculous complaints, that when they go to the country where they take more exercise, the compounds of uric acid, which were deposited in the bladder during their residence in town, are succeeded by oxalates (mulberry calculi), in consequence of the increased supply of oxygen." Bird, in relation to this matter, differs but slightly from Liebig. He concludes that the oxalic acid is the result of a re-arrangement of the elements of urea, in which process there is a portion of oxygen given up.

As all know, nitric acid, from the fact that it is capable of dissolving this kind of concretion, is the drug to be used. And we may judge of the propriety of putting the patient at once upon a suitable diet from the following remarks of

Bird:—that there are "some articles of food at once causing the excretion of this substance (oxalic acid) in great quantities, whilst others have an effect of totally checking it." The food, therefore, should be regulated so as to improve the condition of the digestive organs and prevent, as far as possible, the introduction into the stomach of those articles containing oxalic acid, or which from their chemical composition would be likely to be changed into that substance. The remarks elsewhere made in reference to the proper mode of improving the condition of the stomach are applicable here, and need not be reiterated. But the quantity of the food requires a brief consideration. Aliments containing the vegetable acids are of doubtful propriety. The same may be said of saccharine articles, as well as of everything easily changed into sugar. Those substances containing the oxalic acid, as the young stalks of the rhubarb plant, which are now of such general use in our country, and the *sorrel*, (oxalis acetosella), used so much by the French as a sallad, should be rigidly excluded from the diet. Food well cooked, digestible, and derived in about equal proportions from the animal and vegetable kingdoms, is, all things considered, about as available as any that can be selected. Some attention should be paid to the character of the drinks. Hard water, from the lime which it contains, may exert an unfavorable influence, and on this account, where it is practicable, should be avoided.

DIET IN TYPHUS FEVER.

Impressed with the importance of so managing the diet in fever of all kinds, as to secure the greatest possible amount of good without producing any injury, have been all the distinguished medical men from the remotest periods of antiquity. Quite early the opinion became prevalent that, in the treatment of this numerous class of diseases, a vast amount of mischief was caused by the improper use of articles designed for nourishment. From frequently witnessing this

result, some came to the conclusion, that success depended as much upon what was regarded as judicious regimen as upon medicine.

We will pass briefly in review some of the doctrines held by the ancients on this subject.

Hippocrates "*On the Method of Diet in Acute Disorders,*" gives the foundation of all the correct rules which pertain to dietetics in the treatment of fever connected with a high grade of arterial excitement. And so much did he insist upon their strict observance that his plan of treatment, by one, (Asclepiades) has been spoken of "as merely a contemplation on death." Although abstinence was a favorite measure with the Father of medicine in commencing the treatment of what, in his day were called *acute* fevers, he, nevertheless, says that "a diet which is a little too plentiful is much safer than that which is too sparing and thin." Celsus carried his opinions concerning the utility of regimen, perhaps, to an unwarrantable extent. In his judgment food seasonably given, according to Glass's quotation from him, is the best medicine in fever. Valentini also quotes him as saying "Multi magni morbi curantur abstinentia et quiete." Riverius was not behind his day in regard to this matter. "As for the point of nourishment," he remarks, "the diet ought to be thin and sparing in acute fevers. And therein the ancients were so severely diligent as to place the greatest part of the cure in ordering the diet." After this commendation of the plan of the ancients, he goes on to express himself in terms of censure concerning the customs of his own day: "But in our times, at least our country, by the refractoriness of women, who fear nothing but that the sick persons shall be starved, as all their care in a manner is to cram their children with meat like pudding bags, how empty their brains of wit, or their hearts of grace and wisdom matters not; and the indulgence of physicians, who the best of them smell too strong of the mountebank, it is grown into a fashion in all fevers, the most violent and acute, to allow the sick at all times broths of the flesh of hens, chickens, capons, and mutton."

The eccentric Van Helmont had his own notions about diet. He remarks: "this is the truth of diet which nature doth of her own accord shew and teach and let that thing be one perpetual, that whosoever hath obtained the best remedies of secrets, and he presently restoreth the sick, so also he prescribeth no other diet for sick than for healthy folk. For to the healthy all things are accounted healthy, because the digestive ferments do powerfully draw and restrain all things into their own jurisdiction. And so digestion doth prescribe the rules of diet."

Tissot, a French author of the last century, took very strong grounds in favor of abstinence in all kinds of fevers. "The most observing persons," he says, "constantly remark that when a feverish patient sups what is commonly called some good broth, the fever gathers strength and the patient weakness. The giving of such a soup or broth, though of the freshest and soundest meat, to a man who had a high fever or putrid humors in his stomach, is to do him exactly the same service as if you had given him two or three hours later stale putrid soup." After remarking that it is a very fatal prejudice, under which some labor, of trying to keep up the patient's strength by food, he adds, "the only things which can strengthen sick persons are those which are able to weaken their disease."

In his work "On Diseases of the Army," Pringle makes some very correct remarks in relation to the utility of a nourishing diet in putrid fever. He thinks the putrid diseases, so prevalent anterior to his time, were in a great measure suppressed by the introduction of sugar into general use, which he regards as a very powerful antiseptic. Huxham was also aware of the propriety of a nourishing diet in fever of a low grade of action. He says: "Indeed, as these fevers run very often out to a great length of time, supporting drinks and diet are necessary, without which the patients certainly sink under them."

Cullen notices the prevalence at various periods of putrid

fevers, but gives little or no advice in relation to the diet proper in their treatment. Thomas objects to anything in the treatment of malignant and putrid fever, that would be calculated to sustain the system, unless there should be no congestion present.

Fordyce, in his Third Dissertation on what he calls regular continued fever, objects to the use of animal food in all varieties of fever. A very moderate use of farinaceous vegetables is all that seems to him necessary. He says: "If in health food of easy digestion is sufficient to maintain the powers of the body, it is certainly capable of maintaining them in disease, where from the facility of its digestion a greater proportion of it will be converted into chyle than of animal food of much more difficult digestion."

Such are the opinions which, anterior to the time of Armstrong, constituted the literature of dietetics in regard to fever. Hippocrates, Celsus, Riverius, Tissot, Fordyce, Cullen, and Thomas evidently inclined to the side of a spare diet in every variety of fever. Huxham and Pringle advocated the same plan in fever of much arterial excitement; but in the treatment of the epidemic putrid fevers of their day they recommended a nourishing diet from the commencement. So far as we know, they were among the first that succeeded in drawing the attention of the profession to the importance of this useful measure.

At the time that Dr. Armstrong wrote his work on typhus, abstractions from the vital current and everything calculated to waste the energies of the patient, were looked upon by a large portion of the profession as being prejudicial in fevers of a low grade of excitement. The doctrines of Pringle and Huxham were regarded as being correct, and as being confirmed by the results of practice. The ingenious author, however, to whom we have alluded, gave a very unfortunate impulse to the depleting plan of treating typhus and all its allies. Congestion in some form or other, according to him, was the cause of all the debility and prostration incident to the complaint, and as a consequence the obvious remedy,

with such pathological opinions, consisted in depletion general and local. The salutary suggestions of Huxham and Pringle were disregarded, and the disease was looked upon as being entirely amenable to antiphlogistic remedies.

Current as this doctrine has been in Europe and America, it is destined to take its place among the things that are obsolete. Observing men every where are becoming satisfied that it is wrong in theory, and wrong in practice. Since the cholera made its appearance, continued fever of every variety is most successfully treated by abstaining as much as possible from free sanguineous evacuations; and by adopting, in everything like typhus, the feeding plan of treatment. This is the testimony of those well qualified to judge, having charge of European and American hospitals; it is also the decision of the skilful part of the profession throughout the country. A question might here be started, whether or not febrile diseases have undergone any material change since the advent of the notorious and fatal pestilence to which we have alluded? As all know, such epidemics do work their impression upon, or modify in some way or other the diseases that succeed them. From the fact, nevertheless, that the correct doctrine relative to adynamic fever obtained, and was successfully tested by practice, anterior to the advent of the cholera, there is good reason for supposing that it is now what it always has been.

We have premised these remarks on the doctrines of the ancients for the purpose more particularly of adverting to the use of food in the treatment of what in our country is called *epidemic typhus fever.* Between the ancients and moderns there is no difference as it regards the propriety of abstinence, or a spare diet in continued fever connected with a high grade of arterial excitement, formerly called acute fever. The teachings of the Father of medicine in regard to such are as valuable as any that have ever been delivered; and are as current at the present time as they were in the days in which the Coan philosopher flourished. Our object is to call the attention of the profession to the sustaining, strengthening

plan of treating all febrile disorders in which, from the beginning, there appears to be atony of the principal functions of life.

It may not be out of place here to submit some of the considerations upon which this plan is founded.

In prescribing diet for any malady it is certainly not far wrong to pay attention to some of the features of its pathology, its duration, mode of termination, &c.

In the class of disorders of which we are about to speak, viz: the putrid fever of the ancients; the hospital, jail, or camp fever of Pringle; the nervous fever of Huxham; the typhus of Armstrong; the adynamic gastro-enteritis of Broussais; the typhoid of Louis and Chomel; the follicular enteritis of Andral; the dothinenteritis of Bretonneau, and the epidemic or winter typhus of American writers, there is, among other things, a well marked tendency in the system to debility, marasmus, and disorganization of the tissues. The debility is seen in the general prostration, the weakened action of the heart, the impaired condition of innervation, and in the diminished amount of the secretions. Rapid wasting of the tissues is a very conspicuous phenomenon from the commencement. As is well known, this morbid action extends to every organ and tissue of the system, unless the gelatinous and osseous be exempt, and these certainly are found less altered after an attack of typhus than other parts. By far the greatest change is witnessed in the muscular tissue, and in the adipose deposit. Here from the first onset the phenomena of emaciation are conspicuous, and often continue until the patient is reduced to the condition of a skeleton. More or less disorganization denoting the weakness of the vital force, is present in every case of anything like an aggravated character. Hemorrhage beneath the cuticle, (petechiæ) from the gums, alimentary canal, or the air passages is of common occurrence. Vitality in certain parts of the body at times becomes extinguished, and pieces of flesh mortify, drop out, and thus give rise to ulcers. Besides the alterations in the solids, the blood in disorders of this class is diminished in

quantity and depraved in quality. It contains, according to Andral, no spontaneously coagulable matter, is deficient in fibrin and globulin, and presents on inspection a dissolved, putrid appearance.

An enlightened system of dietetics, we think, should take into consideration the *duration* of the malady. In fevers that run their course in a short time the importance of this remark is not so obvious, as in those that are very protracted. As a general rule, the malady before us lasts from seven to twenty-eight days. Prevailing, however, in the form of an epidemic it has a certain cycle of changes through which it will run, and from which it cannot be moved, that in a majority of cases have something like a fixed duration. Very often this exceeds the time at which, in health, without food, starvation would occur. This event we know depends to some extent on the amount of fat in the body, the presence or absence of water, and the degree of motion, voluntary and involuntary, to which the system is subjected. In the complaint under consideration there is reason to believe that it would take place much earlier than in health. The functions of respiration and circulation are increased so much in activity, that there is more oxygen admitted into and transmitted through the system, than in health. This never passes out of the system unchanged; hence the secondary or destructive assimilation, the process of waste, is augmented, as is seen in the rapid emaciation, to furnish the materials with which the oxygen is found combined in the various excretions. Attended, therefore, with such circumstances, there is certainly propriety in carefully noticing the duration of the affection, in order that a kind of food may be provided sufficiently nourishing to sustain the patient until the disease has run its course.

Another view may be taken that seems, in our estimation, to make a timely and judicious administration of nourishing substances proper. We allude to the agency of food in obviating *complications.* All know that inflammations, compli-

cating disease, arise in very opposite conditions of the system. We find them occurring with as much facility in typhus, as in synochus; and it would perhaps be safe to remark, that the more a patient is debilitated the more danger he is in from complications of an inflammatory nature. If this position be correct, things having a tendency to keep the system from sinking into a state of prostration, and the avoidance of whatever is calculated to waste the strength of the patient, merit some attention as the means of averting what, oftener probably than the disease itself, causes a fatal issue.

From such views the sustaining plan of treatment seems most entitled to confidence; but some things, it must be remembered, look plausible in theory which in practice are found to be defective; we do not believe, however, that this is the case in the matter under consideration. Better success will be found to attend the course just mentioned than has attended any other to which the malady has, as yet, been submitted. We shall now proceed to a brief detail of the means proper for carrying this plan into execution.

In making a selection of food it should be recollected that the indications will be best fulfilled by articles digestible, containing a large proportion of nutritious matter, the elements of respiration, and, as far as practicable, those most adequate to exercise an antiseptic influence. As has previously been shown, animal matter contains the greatest proportion of nutritious principles, is least combined with adventitious substances, is as readily assimilated as other kinds of food, and has a composition identical with blood. Possessed of such qualities, it must undoubtedly take the first rank as an available agent in the process of nutrition. In the preparation of the food of course it should be reduced as nearly as possible to the fluid form. Tea, made from the fleshy parts of mutton, beef, or from fowls, answers a very good purpose. Analogous to these, and perhaps equally valuable, are eggs slightly cooked, and milk; the former composed principally of albumen, and the latter rich in casein—elements which have,

like the fibrin of flesh, a composition identical with blood.—Besides articles designed for nutrition proper, we want also those which are considered *elements of respiration.* The condition, as we have seen, of the respiratory function is such, that an abnormal proportion of oxygen is introduced into the system, which by combining with the tissues, there is very good reason to believe, is the principal cause of the marasmus. Something, therefore, containing carbon and hydrogen in proportions sufficient to unite with the oxygen of the inspired air, that it may be prevented from acting on the tissues, is what seems, if this view of the matter is correct, to be what is indicated. Vegetables, although not so nourishing as animal food, contains the materials to which we have alluded, in great abundance. Those to be preferred are the amylaceous, found in great abundance in wheaten flour, sago, tapioca, arrow-root, potatoes, &c. The "*cream of ptisan*" of Hippocrates, made from barley by boiling it to the consistence of cream, and straining it, is, we suppose, as valuable a preparation of vegetable food as any of modern origin. In having it prepared this author had his *thin*, *exactly* thin, and *extremely* thin, just as seemed to be required.

With respect to the articles best calculated to exercise a direct antiseptic effect, in order to oppose, as much as possible, the tendency to a diminished cohesion of the solids and fluids, we can say but little. Pringle as we have seen ascribes the decline, in his day, of putrid diseases, such as scurvy, leprosy, dysentery, plague, and pestilential fevers, to the introduction of sugar, beer, and various liquors into general use. It is known, nevertheless, that saccharine articles are very liable to produce flatulence, acidity, and other troublesome symptoms in the alimentary canal. In favor of the utility of beer and several kinds of wine, there is some testimony; but on considering the ambiguous character of any agent in fulfilling the indication before us, it may be concluded that as much can be done to resist the septic tendency by keeping the nutritive process in vigorous action as in any other way.

Stress was laid by the ancients on the *time* during the course of a fever at which the patient should have food. Hippocrates was averse to assigning any particular period as most proper, but insisted that it should be governed by circumstances. Subsequently to his day the subject was agitated by Asclepiades, who fixed upon the fourth day as the most proper period to commence the administration of food. This plan was adopted by Themison, and also by Galen. Among the moderns this question has ceased to be of any interest, as we have consulted none of them by which it is, to any extent, discussed. It is an old adage, nevertheless, that there "is a time for all things," and it may readily be presumed that there is a time at which it would be most proper to commence the administration of food. To the doctrine of Hippocrates we incline, that it should be governed by circumstances. If the patient is very lean it might be advisable to commence giving food at an earlier stage than where an opposite condition obtained. In cases of sudden invasion, characterized by much excitement, abstinence for a few days generally proves beneficial. On the contrary where the disease gradually steals possession of the system, attended with no violence in the symptoms, and from the character of previous cases of a like nature danger of great prostration is apprehended, it would no doubt be well to allow food from the commencement. During the prevalence of an epidemic we can generally learn enough of its pathological habitudes to ascertain the length of time that cases will be likely to run. If this should be great, no time should be lost in getting the patient at once upon a nourishing, digestible diet.

How often should the food be allowed? Frequently this question is put to the practitioner, in his visits to patients laboring under the complaint of which we have been speaking. In attempting to answer it, we might remark that there are two extremes to be avoided. One is to keep from continually teasing the patient with something to eat; the other is in not letting him fast too long. It should be recollected that there are certain physiological laws connected with digestion

which it is very important to observe during health. We refer to the necessity of preserving certain intervals between meals, in order to give the stomach time to digest its contents. If, therefore, we desire to save this organ the greatest possible amount of labor, a desideratum in the disease before us, the laws regulating healthy digestion should be carefully regarded. Cramming into the organ every fifteen minutes or half hour food that is even digestible and proper as to quantity and quality, never fails to embarrass the action of a healthy stomach, and of course cannot fail to do the same when the organ is in a state of disease. The other extreme is perhaps equally prejudicial. Disorders arise in the stomach of a healthy person by fasting too long; and other things being equal, there is reason to believe that the stomach after a long fast is not so well qualified to perform its office, as it is after the usual time between meals has elapsed. In addition to this, patients much prostrated need the invigorating influence of diet, in conjunction with other things, to keep them from sinking. From such considerations it is obvious, that, in trying to obtain the greatest possible amount of good from diet, it should be administered, not every few minutes, nor once in twenty-four hours; but after a proper length of time has elapsed to find the stomach in a condition to perform its office. The times at which the patient was accustomed to eat during health, we think, might be selected as being not far from correct. Taken oftener than this, unless where some urgent circumstance makes it necessary, it may fail to do good. Finally, system in regard to this matter is indispensable to success. The vital force, it should not be forgotten, is impaired; and as there is but a small portion of it, in the disease before us, available in the digestive process, it becomes necessary to economise this in many cases with the greatest possible care, as the only means left us of resisting the tendency to fatal prostration.

February, 1846.

ART. II.—*Thoughts on Fever.* By JAMES C. HARRIS, M.D., of Wetumpka, Alabama.

The following remarks on the character of the seasons and prevailing fevers of the past year are submitted under the conviction, that it is the duty of every physician to do something to elevate the character and increase the usefulness of his profession; and although they may contain but little, if anything, calculated to effect either object, still as a history of the past they may by comparison throw some light upon the coming events of the future. In entering upon the subject of fever I have a deep sense of the difficulty of my task. Its cause, the morbid phenomena attending it, the modus operandi of the poison producing it, and of the remedies by which it is treated, all are still involved in obscurity. Whether, in adding another to the many hypotheses which fever has called forth, I have added anything of value to the stock of medical doctrine, is left for others to decide.

Medicine of late, under the influence of the lights furnished by organic chemistry, together with those derived from the study of pathological anatomy, has been gradually advancing, and must continue to advance, aided by such powerful auxiliaries, until many of the present errors and abuses are reformed, and a more rational philosophy, and a better practice established upon their ruins. Should I fail in my desire of being useful in every other particular except only that of calling the attention, and fixing the thoughts of my bretheren upon the importance of the subjects involved in this essay, I shall consider myself amply repaid for the labor it has cost in its preparation.

That some of the doctrines advanced are not altogether without novelty, and will therefore by many be considered visionary and false, I entertain no doubt; neither have I the vanity to believe that they are placed by my arguments upon as unfailing a foundation as might be desirable, or as their importance demands; nevertheless I am as thoroughly impressed

with their correctness as though they had received the finishing touch of a master hand. I shall therefore proceed, without further preface, to the consideration of atmospheric air—that immense mass of permanently elastic fluid, which surrounds our globe, and in which we are continually immersed; and which we are informed by chemistry consists essentially of oxygen and nitrogen in the proportion of 21 of the former, to 79 of the latter, with a small trace of carbonic acid, and an atmosphere of watery vapor. Chemistry farther teaches us that these proportions, at the top of our highest mountains and in the deepest vallies, at the pole, and under the equator, —in every situation and latitude, and amid all contending forces are unalterably maintained, an accumulation of one never taking place at any given point to the diminution of the other. True, the quantity of oxygen inspired differs with the temperature and density of the atmosphere, but its combining equivalent is always the same. Hence it is obvious that, in an equal number of respirations, we consume more oxygen at the level of the sea than on a mountain, in winter than in summer, at the north pole than under the equator; and that under all these varied circumstances we find it answering most perfectly the ends for which it was designed, and containing within itself one of the chief elements of organic life.

But whilst we cannot fail to be forcibly struck with the perfect power possessed by this great link in the chain of creation of maintaining its purity, still we must not forget that, owing to the great extent of vegetable and animal decomopsition perpetually in progress, on the surface of the earth, the atmosphere is necessarily adulterated by other gases known to be injurious to health and destructive of life. The conclusion from the researches which have been best conducted, I believe, is that the exhalations furnished from vegetable matter are the principal, if not the sole cause of our autumnal fevers. We are told, indeed, that the experiments of Broschi in the most pestilential regions of the Campagna di Roma, and those of Moschati on the air of some insalubrious

rice fields in Tuscany, as well as those of Rigand de l'Isle in the marshes of Languedoc, all made with the view of detecting this poison, resulted in nothing more than the discovery of a few flocculi possessing the properties of animal matter. The scientific and laborious experiments instituted with the same view by Boussingault were attended with no better success. Still experience has established the existence of a subtle poison by its deleterious effects, and observation has shown that in its action upon the human system it bears a greater resemblance to carbonic acid than to anything else. Other gases, however, the result of other decompositions, are also found suspended in the atmosphere ready to do the work of destruction, but not in so great abundance, or of so deleterious a character. Some have also contended for the influence of barometrical and electrical states of the air; but how far they are concerned in the development of autumnal fever, I shall not at present stop to inquire.

To be convinced of the existence of a gaseous poison productive of fever, we have only to call to our aid the fact, that where ever we find a large amount of vegetable matter in connection with heat and moisture, there we meet with febrile diseases. To this effect we have the concurrent testimony of the profession everywhere. It is found to be true not less of the Ganges than of the Nile, of the Mississippi valley than of the Pontine marshes. A fervid sun and a fermenting mass of vegetable substances, are unfailing sources of bilious disorder. These positions may be considered unquestionable. The inquiry which then comes up is, how does this deleterious agent operate upon the living system?

That it acts mainly upon the blood in the lungs, through the medium of respiration, is rendered probable by the fact, that in all malarious districts and diseases, the blood appears to be imperfectly oxygenized, never exhibiting that high arterial color known to exist in good health. This black blood is known not to be the natural stimulus of the heart and arteries, upon the healthy performance of whose functions depends the health of the whole economy. Weakened action

of the heart, and depressed and perverted nervous action, follow as a necessary consequence, first perceptible on the pulse, and the nerves of the cerebro-spinal axis, as is manifest from the dulness, headache, chilliness, &c.

Now as it is a well known and invariable law both of the nervous and muscular systems, that they must act and repose by turns; between these systems there is, moreover, so intimate a connection that during the different stages of febrile commotion all parts of the system participate more or less in the general disturbance. Congestion of the abdominal, thoracic, and cerebral viscera are first created. These being repeated, to be again followed by more violent reaction, local inflammation is at length set up in some one or more of the different organs. These now become a new source of irritation, which reacting upon existing derangements, continues to perpetuate the circle of morbid phenomena. But it must be borne in mind that it is only when the atmosphere is loaded with malaria, and when this poison is aided by aerial vicissitudes, and also by some imprudence on the part of the patient, that the morbid alterations to which the blood is subjected are adequate to the production of the varied phenomena of fever.

To recapitulate briefly: the positions assumed are—1st. That the remote cause of fever consists in an additional element in the air; and that it resembles more nearly carbonic acid in its effects upon the system, than any other known element. 2dly. That this poison in the atmosphere through the medium of respiration, the skin, and the stomach, produces an alteration in the blood, upon which deranged nervous action ensues, with local determinations and inflammations. All forms of malarious fever in their first stage, there is good reason to believe, are of a *general* character, and only become local from repeated reactions upon the organization.

Taking, then, as established the foregoing positions, I come next to the consideration of what I consider a more difficult part of the performance; to wit: the modus operandi of some

of the leading articles usually employed in the cure of disease, and more particularly in the treatment of fever. This is a vexed question, respecting which all shades of opinion have been entertained, from that which refers the action of all medicinal agents to their admission into the blood, to that which denies to any foreign substance the power to reach the circulation in its formal state. This latter opinion, if it has not found as large a body of friends as the other, has secured the favor of some very able advocates, and has been defended with great eloquence and ingenuity. But it rests upon very insufficient evidence, and the progress of science renders its basis more insecure every day. It cannot be considered questionable, that a great number of medicines enter the bloodvessels, and find their way to every part of the body. It is through this avenue that many of our remedies reach the seat of morbid action. Quinine, for instance, when swallowed and mixed with the contents of the stomach, passes directly into the upper intestines, where it is taken up by the lacteal and absorbent vessels, and delivered under the influence of the vital forces, essentially quinine, into the circulation. Upon this subject M. Piorry remarks, that in twenty or twenty-five minutes after a person has taken sulphate of quinine the urine tastes strongly bitter, and that he gave a quantity of urine of this kind to Vallée to analyze, who obtained from it sulphate of quinine in crystals. Landerer, an apothecary of Athens, obtained a similar result from the urine of a patient affected with intermittent fever, who had taken in some paroxysms 40 grains and even a drachm of the muriate of quinine. Pereira, (Mat. Med. vol. 2, p. 456,) also proposes, upon the authority of some other writer, the cure of intermittent fever in the child by its administration to the mother during the months of lactation. From all of these facts it is as evident that quinine is absorbed and carried into the circulation as that it is swallowed. Of this there cannot be a doubt. How then does it act after having become mingled with the circulating fluids? The following explanation is submitted: The quinine having come in contact with the

malarious poison in the round of the circulation, neutralizes and destroys it; thereby the blood is improved, receives oxygen more readily, becomes more perfectly arterialized, imparts, consequently, more force to the nervous centres, and increased energy to all the vital functions. That such is the case the recorded experience of a large majority of the profession goes strongly to prove. Hence the fact that in those depressed states of the system which occur in congestive chill, quinine may be given with safety in doses which in another condition of the system would give rise to distressing effects. In the morbid state attendant upon the chill, the principal force of the medicine is expended upon the malarious poison in the blood, neutralizing and correcting it, and thereby elevating the vital energies; but in an opposite state it acts upon the blood entirely, giving to it an additional power to absorb oxygen, and thereby adding fuel to an already consuming fire.

It is also probable that an additional property is communicated to the venous blood by the quinine before it enters the lungs, by virtue of which it acquires the power to elevate our temperature, and increase the activity of the heart. That this is the fact, to some extent, all the attendant circumstances seem to indicate.

The following facts bear upon this point, and appear to me to sustain the view I entertain of the modus operandi of quinine. Professor Yandell, in his Prize Essay on Bilious Fever, remarks, that a patient of his, "a young man from Alabama, having had a severe attack of pleurisy in the winter, fell into chills and fever in the spring. He tried the quinine in doses of one and two grains, and with them succeeded in checking the disease; but it still returned. In one of the paroxysms, perhaps the second or third of a relapse, I gave him 16 grains at a single dose, in the height of the chill. Warmth was soon restored; sweating came on without any well marked febrile paroxysm; and the chills left him to return no more." From the operation of the remedy in this and analogous cases Professor Yandell concludes that quinine, in

small doses, stimulates, and in large ones calms and subdues nervous and arterial excitement.

Dr. Byrne in an analysis of a Report to the Surgeon General, on large doses of quinine (Western Journal of Med. and Surg. for 1845, p. 250,) says, that the terms tonic, stimulant, or sedative convey no just impression of the effects of quinine, its whole force being expended upon the nervous system, and its influence over the circulation being doubtful and uncertain. The effects perceived, he continues, are those of an anti-periodic, or in more comprehensive phrase, a direct antidote to the malarial poison. How this effect is produced, he adds, must remain unanswered.

Now the explanation we would give of the action of this remedy is, that it is always *stimulant*, and that its peculiar effect upon the skin, the circulation, and the nervous system depends upon their state at the time of its administration. Its uniform tendency is to destroy the fever-poison wherever found, in the lungs, the venous trunks, or the capillaries.

That the result of an overdose might be the reduction of a full, strong pulse, and increased nervous action, I do not pretend to deny; but that this is not by any means the invariable result of an ordinary dose in similar stages of the system, any one may satisfy himself by an experiment such as I witnessed last summer. I witnessed the administration of quinine in 10 grain doses at intervals of an hour until 40 grains were taken, in stages of open excitement, with furred tongue, hot skin, and full, strong pulse, with no other effect than an aggravation of all the symptoms, and the addition of *tinnitus aurium*, and pain in the head. The reason of all this is obvious; the blood being sufficiently arterialized, the quinine did nothing more than add to the general excitement and distress, by virtue of its power manifested in the way heretofore described.

In the stage of collapse, or where there appears on the part of the system a tendency to sink, I highly approve of the liberal administration of quinine; it may be used also

with safety and advantage, as all the world knows, on the decline of fever, or as soon as any softness of the pulse and moisture of the skin make their appearance. But that much harm has been done by its administration during stages of excitement, I am constrained to believe; and I trust the day is not far distant when a more rational view will be taken of the remedythan that which now leads to its employment in such opposite states of the system.

I will now offer a few remarks on the operation of *calomel*, and then dismiss this part of my subject. That this article produces its remedial effect chiefly by entering the circulation, is quite as certain as that quinine acts in that way, but here the analogy between the remedies almost entirely ceases. Calomel, owing to the peculiar and powerful influence it is known to exert over the liver and glandular system generally, is an article unique in its modus operandi. That it not only enters the circulation, but also may remain dormant in the system for several years, and then manifest some of its peculiar effects upon the glands of the throat and mouth, and upon the mucous membranes, in a very insidious and fatal manner, there is good reason for believing. The case of ulcerated tongue and mouth communicated by the writer in the April number of this Journal, (1842, page 319,) is one in point. But these truly interesting and singular effects occuring out of the usual course of its operation, once perhaps in ten thousand times, are to be ascribed rather to peculiarities of constitution, than to any inherent property in the remedy itself. That calomel also possesses the power to resist the influence of the vital forces, in a very eminent degree, is evident from the fact, that a gold watch worn next the skin, or gold rings upon the fingers during a mercurial saturation, become whitened with an amalgam of mercury. In its action in the removal of fever it seems to pervade the whole sanguiferous and glandular systems, imparting to the former certain powers that enable it to place the secreting apparatus of the latter in active operation. The circle of its action ap-

pears to be extended and powerful, no tissue of the system escaping its influence; and it is not asserting more than experience sanctions, when I say that a remedy with its stimulating and alterative properties, under judicious management, and on correct principles, is susceptible of almost universal application, and may fulfill almost any indication in the cure of disease.

When under the influence of this remedy the nausea and desire to evacuate the bowels by purging are to a considerable extent, I apprehend, brought about by certain specific and stimulating properties being added to the bile, and other secretions.

Without further preliminary remarks I will now proceed to the main object of this paper, which is to give some account of a fever with which Wetumpka was visited last autumn, and of the medical topography of the locality in which it prevailed.

The Coosa river, which separates East and West Wetumpka, after it enters the limits of the town, runs for the first half mile in nearly a south-west course, when it passes under the bridge, and then shifts its direction more to the south-east. Pursuing this course for about a mile more, and then turning west, it runs in a devious line until its name and waters are lost in those of the Tallapoosa.

In the original plan of the city, the streets were laid out North and South, East and West, crossing each other at right angles; but owing to the peculiar structure of the surface of the earth upon the eastern side this arrangement has been lost. Here Main street runs south from the end of the bridge, and Bridge street east, two hundred yards to the market house; forming an angle here upon its outer section with Gay street, then runs north-east and parallel with the river, to the north eastern extremity of the corporation.

At the north-eastern extremity of the city, and upon the eastern side of the river a range of hills sets in, at the distance of a quarter of a mile from the river, and continues

parallel with it, gradually approaching it, until it arrives at the market house, where the range suddenly changes its direction due south, and continues this course until the hills are lost in the high lands separating the waters of the Coosa from those of the Tallapoosa rivers.

At low tides the current of the river above the bridge is thrown almost entirely against the western bank, leaving exposed to the action of the sun a large amount of decaying vegetable matter. There are also interspersed among the rocks on the shoals many pools of stagnant water, in which a mass of organic matter is continually decaying. One in particular commencing not far above the bridge, and extending some hundred yards up the river, is a fruitful source of exhalation. A large ravine also extends from the water's edge in the rear of the buildings on Bridge street nearly up to the market house, and receives the filth from the greater portion of this part of the city. There are other sources of fever of a local character upon both sides of the river; but as they are similar to those already described, I pass them by without any further notice, referring for a fuller topography to an article by the writer *on Diarrhœa*, published in this Journal in September, 1845, on pages 191–'2.

Now if the wind during the months of August and September sets in, and continues to blow regularly from the north and north-west, for three or four days in succession, over these prolific sources of malaria, what else could be expected, but that all the inhabitants residing on Bridge, Main, Gay, and Company streets, and the sides and tops of the adjacent hills, should become liable in a peculiar manner to fevers? And in the assertion that they always do suffer, to a greater or less extent, I am borne out by the observations of all who have paid any attention to the matter.

The summer and autumn of the past year were seasons as remarkable for their heat and dryness in this section of country, as perhaps any that have been experienced in many years. The thermometer stood steadily throughout the greater portion of the month of July at 4 o'clock, P.M., above

90°. On the 24th it stood at 102°—the highest point to which it was ever known to rise in this city. The dryness was as excessive as the heat, destroying almost entirely the crops of the planter. In fact all animated creation seemed to droop under the influence of the parched and heated atmosphere. Still the city remained comparatively free from disease of all kinds until about the 20th of July. At this time a few scattering cases of fever began to make their appearance. They were at first mild, and, so far as they fell under my observation, of an intermittent and remittent type, most generally the latter, attended with furred tongue, sick stomach, pain in the head, loins, and extremities, restlessness and dry, hot skin. As the season advanced, the pain in the head, extending through from temple to temple, became more frequent, and at times was of so violent a character as to give rise to delirium.

In one of these cases there was a peculiar tremor of the tongue upon protrusion; the tongue was covered with a dark brown fur.

The bowels also became painful, and tender to the touch, and manifested in a few cases a strong tendency to diarrhœa, the discharges being watery.

The heat of the surface was more pungent and intense than I remember to have remarked it since the fall of 1834. The restlessness, in such cases, was extreme and distressing. The pulse varied according to the stage of the case, and the hour of the day and night, being generally lowest about midnight, gradually augmenting in frequency and force until after the middle of the afternoon of the next day. It then gradually commenced declining, but scarcely ever coming down to the healthy standard; on the contrary, it averaged, the most of the time, from 120 to 130 pulsations in the minute, and sometimes even rose above this.

From the above brief description it will appear that the general character of the epidemic was a bilious remitting fever. The remissions were at no time very strongly or clearly marked; the disease was attended with local determina-

tions and inflammations, most generally the brain or bowels being the suffering organs, and sometimes both.

In the treatment of the fever, in the early stages, the lancet, the cold and warm baths, and calomel and ipecac., in combination, were the means principally relied upon by myself for the reduction of excitement, and the preservation of the integrity of the various organs. In the more advanced stages, where the disease had been neglected, or the vital energies appeared overpowered or exhausted, calomel and quinine internally, with sinapisms and blisters to the extremities, and over the seat of the suffering organs, constituted the outline of my curative endeavors.

It was found at all times exceedingly difficult to conform the use of the quinine to the remissions, and on this account I often failed to derive any benefit whatever from its employment.

For the restlessness and watchfulness, and where there was a disposition in the bowels to serous passages, morphia alone, or in combination with calomel, was generally used, and found to answer the end desired. The greatest difficulty, however, experienced in the successful management of the disease, was to procure and keep up free, consistent bilious evacuations. This could only be done, in some cases, by the liberal administration of mercurial medicines; and to show the extent to which it sometimes became necessary to carry this practice, I will conclude this already too much extended paper, by extracting the following case from my note-book.

September 13, 1845. Called at midnight to see Mr. Lyon in consultation with Dr. A. N. Lightfoot, an intelligent and respectable practitioner of our city. The patient had been attacked on the first of the month with the usual symptoms of this fever. Upon my arrival Dr. L. informed me that he had bled the patient twice, blistered his wrists and epigastrium, and purged him liberally with calomel. The peculiarities in his case, were, an intermitting pulse, extreme gastric irritability, a strong disposition to watery discharges under the

use of cathartics. His other symptoms were great heat, but no tenderness at the epigastrium, tongue coated with a dark brown fur, and no appearance of ptyalism, although he had taken large doses of calomel.

Under a joint prescription, he continued to take from 40 to 60 grains of calomel daily, for five or six days, in combination with an occasional dose of morphia. Upon this course, bilious, consistent discharges were soon produced, and easily kept up; and Mr. L., without experiencing any bad effects at the time upon the glands of his mouth, or in any other way from the medicine, is now in the full enjoyment of his usually good health.

March, 1846.

ART. II.—*Stricture of the Urethra, with Retention of the Urine; Division of the Stricture; Puncture of the Bladder; Recovery.* By WILLIAM CALDWELL, M.D., of Louisville, Ky.

Mr. R. M. W.——, aged 24 years, of small stature, and bilious temperament, with black hair and large prominent grey eyes, had been generally healthy, until he contracted gonorrhœa in November, 1835, for which he was treated with emetics, Cooke's pills, balsam of copaiva, and nitre. The discharge from the urethra was several times checked, but as often returned again, until February, 1836, when he was seized with retention of urine. This was partially relieved by the use of fomentations, &c., but from that time he continued to have difficulty in micturition, accompanied with more or less gleet. In June following he was attacked with complete retention; his physician attempted to introduce the catheter, but failed; and he again found partial relief, after twelve hours, in the use of nauseants, venesection, diuretics, and fomentations.

From June, 1836, he had more or less difficulty in micturition, but no complete retention, and was under no medical treatment, until the fall of 1843, when he again contracted gonorrhœa and was treated with Chapman's mixture. At the end of six weeks he was dismissed as cured, but was still the subject of stricture accompanied by gleet.

On the 16th of June, 1844, I was called, for the first time, to see him, in company with Dr. Field. We found the bladder greatly distended from complete retention.

In presence of Dr. Field, I attempted to introduce a catheter, but failed; some resistance was met with just within the scrotum, but it yielded readily, and about an inch further on the instrument encountered a resistance so firm and unyielding that I became satisfied that it rested upon an organized stricture. Finding it impossible to introduce an instrument, we resorted to copious venesection, and other means, to produce relaxation, which in a short time afforded him partial relief. Again on the 24th of July, I was called to see him; found him laboring under complete retention, and relieved him as before. I then advised an operation as the only means of effecting a permanent cure, but he objected to it. He subsequently placed himself under several physicians at different times for treatment; and I saw him no more professionally until about the first of December following, when I was called to see him in consultation with Dr. Squires. He was again laboring under complete retention. I made another ineffectual effort to introduce the catheter; and he was partially relieved as previously. He had now been constantly under the influence of constitutional treatment with strict diet since July, which had only served to prevent complete retention, having made no appreciable progress towards removing the stricture. His constitutional treatment with restricted diet was continued, for the purpose of keeping off if possible another attack of retention, until he could place himself under surgical treatment.

On the 22d of April, 1845, I was called to see him, and found him suffering excruciating pain with distended bladder.

I again attempted to introduce the catheter but failed. Every effort made by myself and others, when called upon to examine his case, to pass instruments of different kinds into the bladder, having failed, any hope of succeeding seemed to be absurd.

Deeming an operation the only resource left to save the patient's life, and afford him permanent relief, I sent for my partner, Dr. John D. Winston, of Columbia, Ky., at which place I then resided. Dr. W. attempted to introduce an instrument, but without success; and agreed with me that it was impracticable, and that the operation should be performed.

We accordingly explained to the patient and his friends the nature and danger of the operation; that it was probable the incision would have to be continued to the bladder, and the wall of the bladder punctured, forming a new canal and neck to that viscus; and that the operation was condemned by high authority, &c. But he called upon me to operate; stating that for nine years he had not voided his urine without pain; that at best it merely dribbled away between his feet; and that he was evidently growing worse, so much so that his life had become a burthen to him.

With the concurrence and assistance of Dr. Winston, I determined to proceed to the operation the next morning.

April 23d. We proceeded, in the presence of Drs. Field and Hardin, to the operation. Our patient was placed on a common dining table on his back, confined, as in the operation for stone, with his legs flexed, and his heels resting upon the palms of his hands; a silver catheter was passed into the urethra until it rested upon the stricture, and was then given to the hands of an assistant. Standing between the legs of the patient, at the foot of the table, I cut down upon the catheter behind the scrotum; a grooved director was then passed into the urethra and upon it the incision was continued through the stricture; the walls of the urethra at this point were very dense and firm, and about an eighth of an inch thick. With some difficulty, the catheter was carried for-

wards about three-fourths of an inch, when it was again arrested; the director was then resorted to, and the canal was fairly laid open through the second stricture. The parietes of the canal at this point were about a quarter of an inch thick, and of a semi-cartilaginous appearance. Thus far the operation progressed favorably, no obstacle having presented itself which was not readily overcome. We had now a cut externally of two inches, and the urethra divided to the extent of an inch and three-quarters from the bulb backwards towards the bladder. But in attempting to trace the canal further we found the end of the director resting on the ulcerated parts, which seemed to have no communication with the membranous portion of the canal. Having failed in every effort with the director, a small probe, and the catheter, to trace the canal further, we directed the patient to pass his urine, hoping to find the canal by tracing the stream of urine; but in this we failed also, for it seemed to force its way into the wound through the diseased and mutilated parts in every direction, giving no clue to the natural channel, or any communication with the bladder whatever. Our patient being greatly exhausted, it was determined to defer any further search until he should have some rest; accordingly we placed him in bed where he spent the remainder of the day and night in tolerable comfort.

24th. During the day, when the patient's strength would permit, every effort was made to trace the canal, until late in the evening, when retention came on, and we gave over the search. It was then agreed that we should continue the operation, but it was thought best to defer it until morning, because it was then late, the bladder was not as full as we wished it, and the patient was very much fatigued; at the same time there was no indication calling for immediate interference. He spent a bad night.

25th. The mode and character of operation being agreed upon, we proceeded, in the presence of Drs. Fields, White, and Walker, to continue the incision into the bladder, punc-

turing the wall of this organ as near the neck as possible. The patient being placed on the table and confined as previously, the fore finger of the left hand was passed into the rectum and slightly depressed. A sharp-pointed bistoury was then seized between the thumb and forefinger of the right hand and carried into the wound with the point resting on the forefinger. Thus guarded, as the way was felt by the finger, the point of the instrument was carried forward, and with lateral motions given it by the thumb, the parts were divided to the bladder, which was punctured with a free incision. As the urine gushed out a female catheter was inserted from the external wound into the bladder, and the end stopped; a male catheter was then inserted into the urethra, and, the other being withdrawn, was conveyed through the newly formed canal to the cavity of the bladder. It was then confined in its place, the external wound dressed, and the patient returned to bed. During the afternoon, doing well; 7 o'clock, P.M., had a slight chill—lasting 10 minutes, followed by fever; pulse 130; distressing thirst; gave solution of cream of tartar. Nine o'clock at night—sweating; pulse reduced; feels comfortable. Twelve o'clock—severe chill; great distress, with difficulty of breathing; ordered calomel and morphine; mustard sinapisms to the spine, with warm applications to the extremities; chill lasted half an hour, followed by fever, thirst, &c.; pulse fleeting. Two o'clock—commenced sweating; pulse very quick.

26th. *Morning*—Improved in general symptoms; quiet, with moist skin. ℞. Calomel and morphine every five hours, and elm mucilage as a drink. Ten o'clock—pulse 127; skin moist; urine passes freely through the catheter, and also through the wound. Twelve o'clock—slight chill. ℞. morphine ¼gr. Chill followed by slight fever and sweating; had a restless night.

27th. Some improvement; pulse 117; skin moist; urine passes freely as before; some appetite; suspend medicines. Ordered milk and rice diet; mucilaginous drinks.

28th. Still improving; no action from the bowels since the 25th; gave enema. Five o'clock, P.M., pulse 95; still improving, but no action from the bowels; repeat enema; spent a restless night.

29th. Pulse and general condition about the same. Two o'clock, P.M., catheter clogged up; withdrew it and inserted a female catheter through the incision in the perineum; having prepared a male catheter it was passed into the urethra, and, after withdrawal of the other, was carried on to the bladder without difficulty; the external wound was closed and dressed with adhesive strips. Spent a comfortable night.

30th. Urine passes freely through the catheter with some bloody matter; pulse 95. Ordered thin squirrel soup as diet.

May 1st. Skin pleasant; no thirst; pulse 88; appetite good; tongue clean and healthy. Ordered enema; chicken soup as diet. Five o'clock, P.M.—enema brought away healthy discharge from the bowels; pulse 85; doing well.

2d. Still improving; pulse 80; tongue clean and moist; appetite good; rested well since yesterday. Ordered milk and farinaceous diet.

From this time there was gradual and steady improvement. The catheter was examined daily, but the parts seemed to be healing so kindly and were so free from irritation, that it was thought best not to remove it until the 3d of June, when it was removed and cleansed, and re-inserted without difficulty, the patient exhibiting very little tenderness. On the 6th, the catheter was removed at 10 o'clock, A.M., and was not replaced until 5 o'clock, P.M. The urine passed freely; there was no pain or tenderness; the parts felt natural.

On the 8th, the instrument was removed and not replaced until the next day. The urine passed in a full, free stream; parts feeling perfectly sound, and the patient's health and strength daily improving.

From this time, the period for leaving out the catheter was gradually lengthened. I saw the patient occasionally until he learned to remove and introduce the instrument himself

without difficulty. He was then dismissed as cured, with the direction to introduce the catheter two or three times a week for some months, by way of precaution.

I saw him in January, 1846; he was perfectly well, had entire control over the urinary organs, and voided urine in a full, free stream, with no sensation but that experienced by a man in perfect health.

April, 1846.

ART. IV.—*A Case of Pneumonia, succeeded by Purpura Hemorrhagica and Abscess.* By W. H. STILWELL, M. D., of Madison county, Tennessee.

J. B———, a laborer, aged 17 years, had an attack of pneumonia four years ago; was seized 9th January last with chill followed by fever, pain in head, cough, with free expectoration of bloody mucus. Pain in left side of the chest about the nipple constant and much aggravated by coughing. I was called on the 10th, and found the pulse 90, small and compressible; surface moderately warm and pale, except the 'circumscribed blush' on the cheeks; tongue moist and slightly coated with whitish yellow fur, edges red; thirst considerable; no nausea; bowels costive. Every act of coughing brought up a mouthful of thin, viscid, bloody mucus. Respiration 40, and anxious. I prescribed the following: Antim. tart. grs 4, aquæ ℥vi, a tablespoonful to be taken every hour until it produced vomiting. Ten grains of blue mass were also exhibited in divided doses at the same time. Scarification and cups were applied over the region of the inflamed lung.

11th. Medicine vomited the patient several times, and produced hypercatharsis; evacuations bilious; pain in head relieved, that in the chest mitigated a little. Temperature the same; cough less frequent, but painful; sputa as before.

Ordered a large blister to left side of chest; calomel 1 grain, opium ½grain, every three hours. Continue the antimonial solution in nauseating doses.

12th. Medicines had been regularly taken; tolerance of antimony established. Blister drew well, and pain much relieved, but migrating into sternal region; cough and sputa the same.

It would be unnecessarily tedious to detail the daily progress of this case throughout. The tart. antim., calomel, and occasionally opium, with repeated blistering, were persevered in with but slight alteration of the patient's condition until about the 9th day, when great apparent amendment began to be visible. There was then gentle diaphoresis; pulse 85, and weak; pain slight; cough occasional; sputa yellow, opaque, without blood; tongue cleaning; no thirst, and appetite returning. In short, on the 23d my visits were discontinued, under the belief that he was convalescent and out of danger.

On the 25th I was again sent for, and found him with haggard countenance; eyes dull; skin natural, moist; pulse scarcely perceptible, and about 110; no pectoral pain; cough almost gone; but he was bleeding slowly from the nose; had a constant desire to urinate, with excrutiating pain in the region of the bladder, and passed from a gill to half a pint of almost pure blood at each evacuation of that organ. His breast and extremities were punctuated with dark red specks, (petechiæ) the size of a pin's head, without elevation at first; on detachment of the cutis, an escape of blood took place sufficient to stain the sheets in spots. Blood was also oozing from the surface of the last blister. The bowels were in a natural condition; the patient was without appetite. Prescribed alum and opium at the moment, and afterwards pills of acetate of lead 1gr., opium ½gr.; one to be taken every two hours.

26th. Patient in the same state. Directed port wine to be given freely as a drink and in his food. In addition to the

above medicines, gave 12 drops tinct. mur. iron every two hours; lead water to be applied to the hypogastrium.

27th. Patient better; continued the same medicines, and in a few days the hemorrhage ceased entirely; his appetite returned; his pulse became fuller, but continued too frequent; hectic flushes and some nocturnal sweating were present; bowels confined four or five days from the opium. Pain was again felt in the left side of the chest two inches above the nipple, attended by dullness on percussion, a total absence of respiratory murmur, and pectoriloquy. Cough became in a short time paroxysmal and convulsive. This condition of things lasted until the morning of the 15th of February, when, while struggling with the most violent fit of coughing he had ever experienced, the abscess burst, and he was nearly suffocated by the discharge from the lungs of half a chamberpotful of a yellowish purulent fluid, of a pungent, penetrating odor. He continued to expectorate for several weeks; the matter becoming more consistent and daily diminishing in quantity, while his general condition improved rapidly. He is now free from all complaint; no medicine whatever was taken after the discharge of the abscess.

Pneumonia is more or less prevalent in all the western counties of this State, during the latter autumnal and the winter months. Indeed, a gradual transition from autumnal bilious remittent fever, to pneumonia, is often observed; the first examples of the latter partaking always partially of the bilious form. Later, the disease assumes more of the inflammatory character; although it seems to be generally admitted that there exists a material difference between the disease as it occurs here and in more northern latitudes. Here there is perhaps more hepatic derangement, and less tolerance of a vigorous antiphlogistic treatment than in colder regions. True pleurisies are rarely seen. It is observed that men are most liable to attacks of pneumonia, in consequence perhaps of their greater exposure, the largest proportion of cases occurring among the laboring classes. The period of life

most liable to attacks of the disease is from fifteen to thirty years.

During the past winter there were about the usual number of pneumonic cases, and as a general remark they presented the bilious appearances.

The above case, and a few others which occurred in the practice of a neighboring physician, seem to constitute exceptions. I did not see the others alluded to; they all occurred in one family, and were described as bearing a close resemblance to the one detailed above; the chief difference consisting in an earlier development and greater intensity of the typhoid symptoms, and also in their proving fatal in about half the instances.

Such cases as that of J. B. are not of frequent occurrence, if I may judge from my own observation. One strikingly analogous to it, however, in its origin, progress, and termination, is reported by Dr. L. P. Yandell in the Transylvania Journal of Medicine, (vol. I, page 237), the following extracts from which will be read, I think, with interest:

"Miss G., daughter of a respectable farmer in the vicinity of Murfreesborough, Tennessee, aged about eighteen years, of a stout frame, and robust habit, was attacked on the 15th day of January, 1827, with pleurisy, blended with peripneumonic symptoms. The attack being violent, an energetic practice, consisting of venesection, cathartics, and nauseating doses of antimony, was resorted to. It was found necessary to repeat the bleeding more than once, and calomel, in ten grain doses, was given for several nights in succession, followed by saline purgatives next day. Blisters and diaphoretics succeeded in due time, and the disease appeared to be yielding to the treatment.

"But on the fifth day of her indisposition, the patient experienced an attack of diarrhœa, by which she was alarmingly prostrated. It yielded, however, in a few days, to opium and acetate of lead, conjoind with the compound powder of

ipecacuan; and by the use of the carbonate of ammonia she was again speedily convalescent.

"On the 30th we heard from her, at which time she was considered cured. We saw her, incidentally, on the 31st; she was engaged in light manual labor, but she still experienced some pain in the breast, slight cough, and dyspnœa. Believing that some vestige of the disease, in the shape of sub-acute inflammation still remained, we ordered her a grain of calomel, with a fourth of a grain of opium every night on going to bed, with a view of producing an alterative effect.

"We left our patient hoping to hear no more of the case. But the worst was yet to follow. On the 5th of February she was attacked with hemorrhage from the nose and gums, which resisting all the domestic remedies of the family, caused us to be called on the night of the 11th. When we arrived at her bed-side we found her prostrated to the lowest point; her countenance exsanguineous and sunken; her voice weak and tremulous; pulse extremely frequent and scarcely perceptible; the hemorrhage from her nose and gums still in progress. In the course of the day, upon a slight muscular effort, she had once experienced syncope.

"Upon examination we found the extremities covered with petechiæ, and were informed that they existed on other parts of the body. They were to be seen lining the tongue, gums and fauces. Blood came, occasionally, from the ears, and from the nostrils it fell in drops without intermission. It was ejected from the mouth with the saliva.

"The whole class of vegetable and mineral styptics had been gone over without effect—the bleeding continuing, and the patient in the most imminent peril.

"Without loss of time we commenced with bark and the sulphuric acid, in doses as large as her stomach would bear. A gargle made of borax, and cold cloths to the back of her neck, were conjoined, with temporary advantage.

"In a few days, under this course, the hemorrhage ceased; the vital powers rallied; the petechial spots disappeared; and

considering her extreme debility, she enjoyed a rapid convalescence, and is now in the enjoyment of good health."

In this case no abscess formed in the lungs; but in every other particular it bears a strong resemblance to the one the history of which I have given. I have been disposed to ask, in reviewing the case of J. B., whether the disease with which he suffered differs from the "*pneumonia typhodes*" of the eastern and middle States; and whether it was not, from the beginning, a typhoid disease? I have also sometimes asked myself, whether the free use of the tartarized antimony had any agency in inducing the hemorrhage, and other secondary symptoms? I find that Dr. Yandell, too, was inclined to look to the treatment for the origin of the subsequent evils in his case. "Cathartics," he says, "were possibly administered too freely in the acute stage of the complaint. The diarrhœa, with the consequent extreme prostration, was probably produced by this cause." He supposes it "possible that the calomel was the cause of the purpura," although he insists, on good grounds, that the mercurial was indicated in the inflamed condition of the lungs. I have supposed that the more liberal use of calomel, in my case, might have prevented the formation of the abscess. Tonics, in Dr. Y.'s case were beneficial. Would they, in mine, have saved the patient from the typhoid symptoms, if they had been seasonably interposed? The whole subject of purpura, its cause, pathology, and best treatment, is a most obscure one, and the discrepancy of opinion concerning it as great as it was half a century ago.

March 10th, 1846.

REVIEWS.

ART. V.—*Homœopathy, Allopathy, and 'Young Physic.'* By JOHN FORBES, M.D., F.R.S., &c., &c. Philadelphia: Lindsay & Blakiston. 1846. 16mo. pp. 121.

About the time that Galvani made the signal observation which has perpetuated his name in connexion with a new and wonderful science, Hahnemann was engaged in translating Cullen's Materia Medica into German; and while about that task the fundamental doctrine of Homœopathy entered his imagination. Up to that period, the forty-fifth year of his life, he seems to have been reconciled to the prevalent system of the times; but the attempt of the Edinburgh professor to explain the action of bark in curing intermittent fevers appearing to him unsatisfactory, he resolved to experiment with it upon his own person. He was in the most perfect health when he entered upon these experiments; but soon he felt a change; he had scarcely taken a full dose of the medicine before he was seized with all the symptoms of ague. And "forthwith," says his historian, "arose in his mind a conception of the great truth which was destined to constitute the basis of the new art of medicine." It was a natural question, that which proposed itself;—"May not the power of cinchona to cure ague, depend on its power to excite in the healthy body a similar disease?" With the view of answering it, he made numerous trials with various medicines upon himself and others, and his report was, that they never failed to "excite in the healthy body the same symptoms which they

were capable of removing where these occurred naturally in the diseased body." His next step was to look into the records of medicine, as to the effects accidentally produced by poisons and other strong drugs. Here he thought he found everything confirmatory of his peculiar views derived from experiment, and the conclusion was no longer to be resisted —"that every disease is best cured by that medicine which is capable of producing in the healthy body similar symptoms, or a like disease." Hence the doctrine of *homœopthy*—homion pathos—stated briefly, "*similia similibus curantur*—*Like are cured by like*, i. e., *homœopathically*."

This doctrine, we have seen, is as old as galvanism, and comes down to us from a former century. It is no upstart doctrine, that, having amused the minds of men for a few brief years, has sunk down into "a dark and long outliving night." It has survived its author, and seen a generation of men pass away from the earth; and still it exhibits no indications of decay. It has spread over the civilized world, and taken the deepest root where men esteem themselves most advanced in civilization. Everywhere instances are known of physicians who have quit the regular walks of the profession to enlist as its disciples, and their apostacy has been rewarded by a full share of public confidence. Hospitals have been erected in which to make fair and ample trial of its efficiency; kings and princes in other lands have been its patrons, and the first of American poets is a convert to its truth. Finally: it has found advocates among men of real science; physicians of learning and experience have been won over to it; and it is now entertained and taught by a professor in one of the oldest and most noted of British Universities. Our allusion is to an institution no less renowned than the University of Edinburgh, the Professor of Medicine and General Pathology in which, W. Henderson, M.D., has issued an octavo volume in defence of the system. Great as were the previous triumphs of homœopathy, this is the one which will probably be regarded by the friends of that doc-

trine as the most substantial, and will excite medical men to the most profound reflection.

Such a doctrine, it will be conceded, is worthy of examination—the secret, at least, of its perpetuity and success; and we are glad that it has been made, in a spirit of apparent candor and fairness, and certainly with singular ability, by Dr. Forbes, in the little volume which stands at the head of this article. Homœopathy has been occasionally adverted to, but never formally noticed in the pages of this Journal, and we therefore propose now to lay before our readers some of the conclusions respecting it, at which one of the editors of the Cyclopædia of Practical Medicine, and one of the most eminent of English physicians, has arrived, together with some of our own thoughts on the subject. We will premise that Dr. Forbes has no faith in homœpathy; still his aim, in the work before us, which appeared first in the Review of which he is editor, is not to expose, but to *examine* its pretensions.

Homœopathy stands apart from all other systems of medicine equally in doctrine and practice. All proceed alike upon experience; but while *Allopathy*, in all its branches, is founded upon the action of medicines on the sick, homœopathy has been deduced from the effects of these agents on people in health. This is one feature of homœopathy, but the most distinguishing, and by far the most marvellous one, is the infinitely small doses in which its remedies are administered. Originally, it is said, this was not a part of Hahnemann's system; but was engrafted upon it after its author found that medicines, in appreciable doses, were too powerful in their action upon the system when its susceptibilities were exalted by disease. It has been hinted that his reason for adopting it was one not so creditable to his system—that learning by frequent trials that his homœopathic remedies did injury to his patients, he found it necessary to reduce the dose until they ceased to be felt, and so became harmless. Certainly, as observed by Dr. Forbes, "there seems to be a contradiction in the facts, as well as the reasoning of Hahne-

mann, in regard to this matter." It is from the augmented sensitiveness of the affected part induced by disease, he says, that the remedy operates in infinitesimal doses. If this is the case, how are we to account for the multitude of symptoms —his "medicinal diseases"—recorded in his works as the results of medicines acting on the healthy body? In health this sensitiveness is not present, and yet, if we are to credit his observations on himself and others who experimented with his remedies, it was not uncommon to have a score or two of medicinal diseases flowing from one of his doses. These doses have been more ridiculed than any other part of his system, and still we verily believe that it is impossible to rise to the height of their absurdity. We quote from Dr. Forbes on this subject:

"So minute are the doses prescribed by the Hahnemannic school, that they are scarcely conceivable by the human mind. They defy all the powers of chemistry and physics to detect in them any trace of the remedial substances which they profess to contain, and they almost confound arithmetic in reckoning their amount. We are not ashamed to confess, that our own powers are inadequate to put down in figures an ordinary homœopathic dose, and we suspect that many of the homœopathists themselves would find themselves in the same predicament on trial. The following are the different *attenuations* or doses used:

First	=one hundredth of a drop or	grain.
Second	=one ten-thousandth	do.
Third	=one millionth	do.
Sixth	=one billionth	do.
Ninth	=one trillionth	do.
Twelfth	=one quadrillionth	do.
Fifteenth	=one quintillionth	do.
Eighteenth	=one sextillionth	do.
Twenty-first	=one septillionth	do.
Twenty-fourth	=one octillionth	do.
Twenty-seventh	=one nonillionth	do.
Thirtieth	=one decillionth	do.

"The primary dilutions or attenuations are used comparatively rarely; the higher ones, as the sixth, twelfth, twenty-

first, and thirtieth, very commonly. It may be worth a moment's trouble to try how far we really understand or comprehend these numbers. Looking at the first of these we have no difficulty. The *hundredth* (100th) part of a grain, is intelligible enough; the *ten-thousandth* (10,000th) is comprehensible, but begins to waver before the mental view; while the *millionth* (1,000,000th) part of a grain, puts our powers of comprehension on the rack, and leaves us in a chaos of undefined entities or non-entities, we know not which. We fancy that we grasp the reality, and then it instantly vanishes as a phantom, even beyond the sphere of imagination itself. Having got so far, the additional subdivisions, or attenuations, scarcely add to our difficulties. The mind, in any such case, is occupied by a word more than a thing—and whether the word be a millionth, billionth, or a decillionth, the power of comprehension seems the same.—And yet the *actual difference* between these quantities is immense,—so immense as to be almost as inconceivable as the actual things themselves. This will be more intelligible, we think, by setting it down in words thus:—

One thousand thousands,	is - -	A Million.
One million millions -	- - -	A Billion.
One million billions -	- - -	A Trillion.
One million trillions -	- - -	A Quadrillion.
And so on to -	- - - -	A Decillion.

"Now, we believe this last denomination (according to the English mode of enumeration) would stand thus in figures:—

1,000000,000000,000000,000000,000000,000000,000000,000000,000000,000000,000000,000000.

"Imagine, if you can, a grain of silica, or charcoal, or oyster-shell, (powerful remedies according to Hahnemann and his followers, in this attenuated condition,) divided into this number of parts: and one of these parts is not only fit and proper dose to be given as a remedy for severe diseases, but is an agent of such potent influence on the animal economy, that *one dose* of this amount will continue acting for thirty, forty, or fifty days, and must not be interfered with by any repetition of it, for fear of deranging or destroying its curative virtue! Thus, Hahnemann tells us that a sextillionth of a grain of carbonate of ammonia will act beneficially upwards of thirty-six days; that the decillionth of a grain of oyster-shell (*calcarea*) will require forty, fifty, and even more days, 'to effect all the good it is capable of;' that a similar

dose of plumbago (*graphites*) will act at least from thirty-six to forty-eight days; and a like dose of phosphorus, at least forty days."

Hahnemann was accounted an ingenuous man, and is supposed to have been sincere when he proclaimed these things. He has had honest and learned followers who have adopted them in good faith, and are practising upon them every day. When we object to them, that it is impossible that doses so attenuated can operate, the appeal is continually to experience. Besides, they tell us that these wonderful virtues are imparted by the "frictions and shakings" to which they subject their medicines; and that while they cure diseases if prepared in their peculiar manner, they are inert without such preparation. This, however, does not render the matter any easier of credence. If it is impossible to credit the efficacy of the decillionth of a grain of charcoal, when pounds might be taken with impunity, except for its mechanical disturbance, it is not a whit easier to believe that poundings in an unglazed mortar, and scrapings with a spatula, and shakings in vials with so many drops of water, can add to its efficacy. Clearly, it is impossible for most minds; unhappily, not for all. Some there are that soar above all difficulties, and can believe anything.

But this is not all that homœopathy requires us to accept; nor is it the worst. All this, it is asserted, has for its basis experience and experiment; but there is an important part of the system which is essentially hypothetical, and which even the disciples of Hahnemann find it difficult to assent to.—This is his doctrine of the origin and nature of chronic diseases, of which Dr. Forbes gives the following account:

"Hahnemann maintains that all these, or with hardly an exception, are derived from three cutaneous diseases, *syphilis*, *sycosis*, and *psora*, or common itch. Of the whole class of chronic diseases, he attributes one-eighth part to the two former maladies, and the remaining seven-eighths to the last. In nearly all chronic diseases, then, the real object of con-

sideration with the physician, and the thing to be cured, is not the ostensible diseases, but their all-pervading cause and basis, the psora, or itch. This psora he considers to be originally a disease of the whole system, which only shows itself locally on the surface in its progress. If it be cured in this form by local means, it infallibly gets worse internally, and may long subsist in this condition—for many years even—before it puts on the semblance of any formal chronic disease. In its amorphous state it may be so latent, that, although existing for years, the patient is entirely unaware of being out of health. Often, however, it is productive of a vast variety of obscure symptoms, which are seldom attended to, but which are recognizable by the adept. It is curable in this state; but it is seldom submitted to cure until it has declared itself under the guise of some more formal chronic malady. Then the patient seeks relief from medicine; and wo be unto him if he is treated by an allopath, or even by a homœopath on the general principles of homœopathy. No: it is not sufficient that the remedies prescribed are *similia similibus* simply; they must be taken from a special circumscribed class, named *anti-psoric*, discovered by Hahnemann to be gifted with a specific virtue for the cure of the itch and the itch diseases. It is laid down as an axiom, that *nature cannot possibly cure any of these chronic diseases;* but that, unless treated properly, that is, homœopathically and anti-psorically, they must infallibly get worse until they end in death. And it would seem that, although always curable by the proper remedies, they are as chronic in their cure as in their nature. The anti-psorics may work *tuto et jucunde*, but hardly *cito*, since we find Hahnemann declaring that no one but a quackish ignoramus can fancy that a disease of so long standing can be cured in a few weeks; or, if so cured, it is only for a time, to burst out with ten-fold fury by and by."

Now the whole of this is so purely fanciful, so monstrously absurd, that one has an impression as he reads it, that Hahnemann, when he put forth such nonsense, must have been experimenting upon the credulity of our race. If we should come for the first time upon such stuff in a book which had still to pass its ordeal before the public, and should fail to remember what follies and absurdities men have believed in, we would be amused at the hardihood of its author, and should not hesitate to predict, that it would be rejected by the whole

world with loathing and contempt. And yet even this *quinta pars* of German foolery has found believers, or men who profess to believe it, in all the walks of society, and in our own profession. Such persons scorn the dictates of reason, and it is a waste of time to expend argument upon them. Resting securely upon the teachings of a false experience, they have a single answer to all our objections; but that chances to be a very specious one—*that they cure diseases by their system.* Demonstrate that charcoal, silica, and oyster-shells are among the most inert of substances—render their practice as ridiculous as you please, they have the standing answer—"vain declamations must cease in presence of an experience that cannot err; our patients recover, taking oyster-shells and charcoal."

We say this answer is specious; it is one which the multitude will always deem satisfactory; yet long ago it was announced by the Father of medicine, "*experientia fallax*," and most signally does the observation of every day confirm the truth of the apothegm. The Steam-doctor, the Indian-doctor, the Faith-doctor, the Mesmerizer, all appeal to "an experience that cannot err;" and amulets, charms, and the royal touch, claimed to rest upon the same impregnable basis. How long before men will be taught the truth of the saying, "*post hoc, non ergo propter hoc?*" The homœopathists point triumphantly to the results of their practice. It cannot be otherwise than profitable to see how the account between them and the regular practitioners stands. Dr. Forbes makes the following exhibit of it, which the former party is very sure not to complain of:

"The Hospital of the Sisters of Charity at Vienna was opened in 1832. It is situated in a healthy suburb, and has thus advantages over the great general hospital of the same city. It contains at present upwards of fifty beds. In the beginning of 1835, the management of the hospital was committed to Dr. Fleischmann, and since that period all the patients have been treated according to the homœopathic system exclusively. In the Introduction to the Study of Homœopathy, by Drs. Drysdale and Russel, there is a transla-

tion of a report of Dr. Fleischmann, exhibiting a tabular view of the cases treated at this hospital during eight years—from the beginning of 1835 to the end of 1843. The total number of patients treated was 6551, and the following are the general results:

Remaining from 1834 - - - -	27
Admitted - - - - - -	6524
Cured - - - - - - -	5980
Dismissed uncured - - - - -	112
Died - - - - - - -	407
Remaining - - - - - -	50

"The list includes all the usual diseases, acute and chronic, found in hospitals, and some surgical cases. The following extract shows the number and events of some of the most important and best marked diseases:

	Admitted	Cured.	Uncured.	Died.	Remov.
Abscess of the brain	3	..	..	3	..
Apoplexy	9	4	2	3	..
Cancer of stomach and uterus	5	..	2	3	..
Amenorrhœa and Chlorosis	90	89	..	..	1
Ascites	14	10	1	3	..
Diarrhœa	114	112	..	2	..
Dysentery	44	42	..	2	..
Erysipelas of the face	181	177	1	2	1
Fever, excluding typhus	1036	1007	1	17	11
Typhus, abdominalis	819	669	2	140	8
Influenza	52	51	..	1	..
Dyspeptic affections	173	172	..	..	1
Gout, acute and chronic	102	97	1	4	..
Headaches, various	61	61	..	..	..
Articular inflammations	211	203	..	2	6
Meningitis	17	15	1	1	..
Bronchitis	15	15	..	..	..
Ophthalmia	51	30	1	..	..
Endocarditis	29	29	..	..	..
Pericarditis	2	2	..	..	..
Enteritis	6	1	..	5	..
Pneumonia	300	280	..	19	1
Peritonitis	105	100	..	5	..
Pleuritis	224	221	..	3	..
Measles	25	23	..	2	..
Phthisis	98	..	27	71	..
Rheumatism, acute and chronic	188	188	..	..	..
Scarlatina	35	31	..	2	2
Small-pox	136	120	..	11	5
Tonsillitis	300	299	..	..	1

"It is well known to all physicians accustomed to statistical inquiries, that, without a minute classification of the individual diseases included in any general report of cases, showing the sex, age, condition of patients, the precise character or *genius* of the prevailing diseases, the season, the date of the disease when brought under treatment, &c., &c., no trustworthy comparison can be instituted between any two lists of diseases, however similar in name, and although occurring in the same locality. The difficulty of comparison, will, of course, be considerably enhanced, when the countries, nature of the localities, general habits, &c., &c., of the patients, are different in the two cases. It would, therefore, lead to no useful purpose to institute any close comparison of Dr. Fleischmann's bare skeleton tables with any similar tables of diseases treated allopathically in this country or elsewhere. The conclusions deducible from such a comparison, whether for or against either mode of treatment, could not be admitted as of any positive weight in settling the practical question at issue. To enable us to do this effectually, we would require from each party an incomparably greater number of cases, observed and treated through a long period of time, and each disease discriminated, and all classified according to the rigid requirements of statistics. We do not, however, mean to say that such lists as those of Dr. Fleischmann's are unworthy of notice and incapable of furnishing any information of consequence. This is not the case. Although yielding us no positive results of such data as science demands, they unquestionably furnish us with isolated facts of great value, and even supply materials which may be worked into such rude approximations to truth, as medicine has, alas, been too long content withal. These tables, for instance, substantiate this momentous fact, that all our ordinary curable diseases are cured, in a fair proportion, under the homœopathic method of treatment. Not merely do we see thus cured all the slighter diseases, whether acute or chronic, which most men of experience know to be readily susceptible of cure under every variety of treatment and under no treatment at all; but even all the severer and more dangerous diseases, which most physicians, of whatever school, have been accustomed to consider as not only needing the interposition of art to assist nature in bringing them to a favorable and speedy termination, but demanding the employment of prompt and strong measures to prevent a fatal issue in a considerable proportion of cases. And such is the nature of the premises, that there can hardly be any mistake as to the just-

ness of the interence. Doctor Fleischmann is a regular, well-educated physician, as capable of forming a true diagnosis as other practitioners, and he is considered by those who know him as a man of honor and respectability. and incapable of attesting a falsehood. We cannot, therefore, refuse to admit the accuracy of his statements as to matters of fact; or, at least, to admit them, with that liberal subtraction, from the favorable side of the equation, which is required in the case of all statements made by the disciples and advocates of new doctrines. Even after this rectification, we see that enough remains to justify the inference above deduced. No candid physician, looking at the original report, or at the small part of it which we have extracted, will hesitate to acknowledge that the resuls there set forth would have been considered by him as satisfactory, if they had occurred in his own practice. The amount of deaths in the fevers and eruptive diseases is certainly below the ordinary proportion; but, for reasons already stated, no conclusions favorable to homœopathy can be thence deduced. It seems, however, reasonable to infer that, even in these cases, the new practice was not less favorable to the cure than the ordinary practice. In all such cases, experienced physicians have been long aware that the results, as to the mortality, are nearly the same under all varieties of allopathic treatment. It would not surprise them, therefore, that a treatment like that of homœopathy, which they may regard as perfectly negative, should be fully as successful as their own. But the results presented to us in the severer internal inflammations, are certainly not such as most practical physicians would have expected to be obtained under the exclusive administration of a thousandth, a millonth, or a billionth part of a grain of phosphorus, every two, three or four hours. It would be very unreasonable to believe that, out of 300 cases of pneumonia, 224 cases of pleurisy, and 105 cases of peritonitis, (in all 629 cases,) spread over a period of eight years, *all* the cases, except the fatal ones, (27 in number), were slight, and such as would have seemed to us hardly requiring treatment of any kind. In fact, according to all experience, such could not be the case. But, independently of this *a priori* argument, we have sufficient evidence to prove that many of the cases of pneumonia, at least, were severe cases. A few of these cases are reported in detail by Dr. Fleischmann himself, and we have ourselves had the statement corroborated by the private testimony of a physician (not a homœopath) who attended Dr. F.'s wards for three months. This gentleman watched the course of

several cases of pneumonia and traced their progress by the physical signs, through the different stages of congestion, hepatization, and resolution, up to a perfect cure, within a period of time which would have appeared short under the most energetic treatment of allopathy.

"In examining Dr. Fleischmann's report, the sagacious physician will not fail to be struck by the fact, that the relative proportion of cures, and the relative mortality of the different diseases, one to another, are precisely the same as he is accustomed to see in his own practice. Slight diseases are all cured by the homœopathist, as by the allopathist; dangerous maladies kill a considerable proportion of the patients of both; very dangerous ones, a still larger proportion; and the class of diseases which all true observers and honest reporters have declared rebellious to their most strenuous medical efforts, are found to occupy the same black column in the tables of the old and new school.

"Thus: the cases of dyspepsia (173), the cases of headache (61), the cases of chlorosis (90), the cases of tonsillitis (300), the cases of simple rheumatism (188), the cases of bronchitis (15), are ALL *cured;* while we have 1 death in 52 cases of influenza, 2 deaths in 114 cases of diarrhœa, 2 deaths in 181 cases of erysipelas of the face, 2 deaths in 211 cases of arthritis. As we advance to the still more dangerous class of cases, we find the loss proportionably greater: thus, out of 44 cases of dysentery we have 2 deaths, out of 9 cases of apoplexy we have 3 deaths; out of 14 cases of ascites 3 deaths, and 1 not cured; out 1036 cases of ordinary fevers we have 17 deaths, while out of 819 cases of typhus we have 140 deaths; out of 524 cases of pneumonia and pleurisy we have 22 deaths; out of 105 cases of peritonitis 5 deaths, out of 136 cases of small-pox 11 deaths, out of 35 cases of scarlatina 2 deaths, and out of 6 cases of enteritis 5 deaths; while *all* the cases of cancer (5), *all* the cases of abscess of the brain (3), and *all* the cases of phthisis (98), are either registered as fatal, or as 'dismissed uncured'—which, of course, means the same thing. The only cases in the list which do not seem, at first sight, to come within the above category, are the cases of endocarditis (31), which are all reported as cured. These are, no doubt, severe diseases; and this may seem an uncommon amount of success; yet, when it is considered that the number of cases is not great, that the diagnosis of endocarditis, and even of pericarditis, is less easy and certain than that of many other diseases, and that it is not so much in their primary condition

as in their ultimate effects, that these diseases are dangerous, we believe that even the degree of success here recorded cannot, in fairness be admitted as any deviation from the ordinary course of events in allopathic medication.

"The remarks above made are even of more importance, in relation to the general subject now under consideration, than they may seem to be at first. They not only show that the *kind* of successes and failures experienced by the homœopathists, is precisely the same as that experienced by the allopathists; but they also seem to show that the medication of the former can boast of no *peculiar* virtue whereby it can achieve triumphs in fields altogether forbidden by the latter. Under the influence of medicines, all of which must be considered *new*—new absolutely, or new in their form, mode of administration, and principle of action—we would have hardly expected to find the old relations of curability and incurability exactly preserved. Does not this fact, common to both, seem to point to a *community of power, or want of power*, in the two classes of agents, rather than to a specialty of action and potency in one?"

This is a long extract, and the last that we shall make from the work. It contains much matter for grave consideration. We gather from it, and from other passages in the volume, that the author does not cherish the most exalted notions of the efficacy of medicine. It is painful to perceive this growing distrust in the minds of physicians as they advance in age,—and we believe the change is not uncommon in the experience of practitioners. From being too sanguine of the potency of remedies, at the opening of their career, they come, in the end, to be too skeptical of their efficiency. It cannot be questioned that Dr. Forbes is verging towards this latter extreme, and hence it does not surprise us to learn that some of his neighbors are hinting, that it begins to be time that he had abandoned the practice of physic, in company with that old Edinburgh friend of his whom he quotes with approbation, as saying, that "for two years he had cured his patients with less than the homœopathists, viz., with *nothing at all!*" Cicero wondered how two sooth-sayers could look one another in the face without laughing. We should sup-

pose two old fashioned practitioners of medicine, agreeing in such an estimate of the powers of their art, could hardly meet without losing their accustomed gravity of face.

But let us be just to Dr. Forbes. If his confidence in regular medicine is not great, he has no faith at all in homœopathy, which, he says, "has often failed to cure in cases in which allopathy did effect cures." He considers that the system is "calculated to destroy all scientific progress in medicine, and to degrade the minds of those who practise it,"—engaged exclusively as they are in search for and adaptation of specific remedies to symptoms; that its direct tendency is to sever medicine from the sciences, and establish it as a mere art, "thus converting physicians from philosophers to artisans." And with this conception of its character and tendencies, he conceives it to be the duty of "all who regard the prosperity and dignity of true art, to resist its progress." Has he thrown any obstacle in the line of its march by penning the article under review? We fear not. We greatly apprehend, on the contrary, that he has rather aided its progress.

If such then is his estimate of homœopathy, what is his explanation of the fact, that so many diseases are cured under its ministration? The answer is evident—*Nature effects the cures;* homœopathy does just nothing, and in an open field the *vis medicatrix* triumphs; making good the words of the poet—

> "For Nature then has room to work her way;
> And doing nothing often has prevailed,
> When ten physicians have prescribed and failed."

In this aspect, Dr. Forbes believes homœopathy has contributed something to scientific medicine; it has instituted a grand natural experiment in therapeutics which, as it is "likely to be prolonged through an indefinite period," will supply us, at last, with "a true *natural history of human diseases*, and the means of ascertaining the actual powers of nature in relieving or removing them." There is some truth in this view of

the subject, and it is precisely at this point that the claims of the "system" upon the respect of medical men, terminate. Its merits "have this extent—no more." It has taught us how powerful is nature in the cure of diseases when her efforts are seconded by a proper regimen; and in estimating the resources of homœopathy we must never overlook the dietetic principles upon which its practitioners wisely insist as a cardinal point of their therapeutics. In the stringency of their system we never read of any thing that came up to them, except the "diet absolute" of the physician to the Governor of Barataria, in Don Quixotte, the famous Doctor Pedro Rezio de Aguera. The hostility of this worthy disciple of Hippocrates to fruit, "as being too moist," and to "meat as being too hot;" to roasted partridges because his great master condemned them, and to "stewed coneys, because they are a sharp-haired food," did not exceed the enmity of the homœopathists to many of the common articles of diet. Thus, in his Organon, we find Hahnemann proscribing the following things:

"Coffee, tea, beer, drinks containing aromatics, spiced chocolate, scents and perfumeries of all sorts, tooth-powders (liquid or pulverized) containing aught medicinal, perfumed bags, high-seasoned meats, ices and pastry flavored with aromatics, all herbs and roots having medicinal properties, cheese, meats too long kept, pork, goose, duck, too young veal. The following things are also prohibited: over-indulgence at table of all kinds, too much salt or sugar, all spirituous drinks, over-heated rooms, sedentary life, passive exercise on horseback or in a carriage, sleep after dinner, sexual pleasures, exciting books, uncleanliness, anger, vexation, scorn, exciting play, over-exertion of mind, marshy districts, confined localities where the air is stagnant, &c."

We say, the homœopathists wisely insist upon their rules of diet, and no one we suppose will dispute the truth of the remark. The following case, illustrative of it, occurred to us during the last summer, and the experience of every physician who has been long in practice, no doubt, will furnish

him with similar instances. A man, about 30 years of age, had removed a short time before from the country, where he had been treated actively with mercurial purgatives for a disease of the liver. His complexion was pale, and, altogether, he looked to us like one who had taken too much medicine. Accordingly we advised him to abandon drugs, except so far as was requisite to keep the bowels open, and to rely upon diet for the cure of his complaint. We saw him occasionally, and the system was evidently working well. This spring we met him, after several months, and he had grown fat, his complexion having become good, and his countenance wearing the peculiar expression of health. We were too curious to let him pass without endeavoring to learn how so happy a change had been wrought in his condition. His reply was very brief, but very satisfactory—"*I did'nt get well, sir, till I quit all medicines, and coffee and tobacco.*" What a case this would have been for the homœopathists, and how they would have exulted in its termination, as showing the superiority of "sepia, charcoal, and oyster shells," over rhubarb, calomel and aloes! It is an instructive case, and certainly teaches that medicine is not always good.

But so saying, do we not condemn ourselves also? If we set down homœopathy, with Dr. Forbes, as a *natural history of diseases*—as showing what they are when left to themselves, the corollary is one not flattering to our professional vanity. That the sick often recover under the treatment of these practitioners it is useless to deny; that many acute and dangerous diseases have a favorable termination when subjected to no system of therapeutics but theirs, must be admitted; that they are *cured* homœopathically—by the millionth of a grain of nux vomica, or the quadrillionth (1 000000,000000 000000 000000 000000 000000) of a grain of belladonna, or the decillionth of a grain of *sepia*—we certainly cannot admit. What then is the inference? Clearly, none other than this—that the curative powers of nature, unaided by art, would often accomplish what we now regard as tri-

umphs of medical skill. It is one which we feel no pleasure or pride in adopting; but if it is true, we do not profit at all by shutting our eyes to the truth. Medicine is not perfect; but there is enough about it intrinsically valuable and excellent to bear the touch of the most rigid inquiry. In adhering to it, after admitting all its deficiencies, we feel assured that, in the language of Dr. Forbes, we "are embracing a system which contains a considerable amount of truth, and a yet greater amount of good; and which, above all, is, or may be made, in its exercise, consonant with the principles of science, and is capable of indefinite improvement; while in rejecting homœopathy, we consider that we are discarding what is at once bad—useless to the sufferer and degrading to the physician."

A great *Reformation* in practical medicine, Dr. Forbes believes to be impending. This is his "*Young Physic*," who, in his estimation, has a task only a little less difficult than that of the infant Hercules to perform. We have not time to follow him through the Augean Stable he describes, and repeat his account of the nuisances in it to be abated.

With a good deal of truth, there is a large admixture of what is not true in this vigorous little volume on this subject, as well as some others—much that appears to be candid and fair, but much also that is exaggerated—a good deal of tenderness towards homœopathy, and not a little harshness towards scientific medicine; and it may be questioned, upon the whole, whether the author, by the representation he has given of the two systems, has conferred any real benefit upon his profession.

ART. VI.—*The Diagnosis, Pathology, and Treatment of the Diseases of the Chest.* By W. W. GERHARD, M.D., Lecturer on Clinical Medicine to the University of Pennsylvania; one of the Physicians to the Pennsylvania Hospital, &c. Second edition, revised and enlarged. Philadelphia: Ed. Barrington & Geo. D. Haswell. 1846. 8vo. pp. 288.

The author of this volume has attained among the medical writers and practitioners of this country, an enviable distinction, and a work from his pen on the *Diseases of the Chest* will be accredited as the highest authority on that subject. Dr. Gerhard has had the most ample opportunities of studying disease in a large hospital, and for many years he has devoted special attention to thoracic complaints. As indicated by the title-page, this is the second edition of his work, important additions having been made to it, the results of his unwearied devotion to hospital and private practice. It forms, now, a very complete monograph on pectoral diseases, embracing not only the physical and general signs, but the treatment also of such affections. The work stands in no need of any commendation from us, having already by public opinion been assigned a place among our best indigenous medical productions.

ART. VII.—*A Compendium of the Lectures on the Theory and Practice of Medicine, delivered by Professor Chapman, in the University of Pennsylvania.* Prepared with permission from Dr. Chapman's manuscripts, and published with his approbation. By N. D. BENEDICT, M.D., Fellow of the College of Physicians of Philadelphia; Physician to the Lying-in Department of the Philadelphia Hospital. Philadelphia:—Lea & Blanchard. 1846. 8vo. pp. 258.

This Compendium embraces none of the matter previously given to the public in the two volumes, by Professor Chapman, on Diseases of the Thoracic and Abdominal Viscera,

and on Eruptive Fevers, &c., and is therefore a summary of only a part of the course of lectures delivered by that eminent teacher. The title of the work clearly expresses its character. It contains, in a small compass, the substance of what Dr. Chapman communicates in his lectures; and however little to the advantage of the author it may be to appear before the world in this fashion. it cannot be doubted that the practitioner of medicine will find a great convenience in having the matured experience of an able man thus served up in a nut-shell. We have not room to make quotations from the work; if we could do so, the reader would see that in this compendium he would possess a work, to which he might refer for practical hints on a vast variety of subjects—a '*receipt book*' on medicine, of the highest order of excellence, because emanating from one of the first minds in our profession. Such a compendium ought not to take the place of the elaborate lectures of which it purports to be the cream; but there is an office which it is well fitted to perform; and, as a remembrancer to the author's many pupils, and a book of easy reference for the practising physician, it is likely to be well received.

ART. VIII.—*Five Dissertations on Fever.* By GEORGE FORDYCE, M. D., F.R.S., Fellow of the Royal College of Physicians; Senior Physician to St. Thomas's Hospital, and Reader on the Practice of Physic in London. Second American edition with an Introduction. Philadelphia: Ed. Barrington & Geo. D. Haswell. 1846. 8vo. pp. 403

This celebrated work, the author of which was born nearly a hundred and ten years ago, appears for the second time before the profession of this country, having been issued as a number of the *Select Medical Library.* The Introduction consists of an interesting biographical sketch of the author by Dr. John Bell, editor of the Library. A very bad style, tedious, at the same time that it is wanting in smoothness,

defective punctuation, and an arrangement which rendered it troublesome to refer to any particular passage in the Dissertations, account for their want of popularity. That they possess much intrinsic value, and are entitled to maintain a place among the many treatises which fever has since called forth, is the judgment of the best informed medical readers and critics. In a word, the work is entitled to take its rank among the classics in medicine, and we are ready to acknowledge the debt under which Dr. Bell has brought us by its republication; which will carry many a reader back with us to the days of our pupilage, when "Fordyce on Fever" made a part of the compact little library from which we were wont to derive instruction. Besides adding the Introduction, the American Editor has sub-divided the Dissertations, and affixed to each division a full table of contents, by means of which the difficulty of consulting the work is obviated. The number of practitioners is not small who will be glad of an opportunity of adding this volume to their stock of medical books.

ART. IX.—*A Clinical Introduction to the Practice of Auscultation, and other modes of Physical Diagnosis; intended to Simplify the Study of the Diseases of the Lungs and Heart.* By H. M. HUGHES, M,D., Fellow of the Royal College of Physicians; Assistant Physician to Guy's Hospital, &c. Philadelphia: Lea & Blanchard. 1846. 12mo. pp. 270.

We have just noticed the work of Dr. Gerhard on a subject kindred to the one of which the little volume of Dr. Hughes treats; but while that work embraces the treatment, as well as the diagnosis and symptoms of thoracic diseases, this is confined to these latter points. Its aim is to instruct the student how he shall proceed at the bed-side of patients, whose ailments of the chest he is trying to comprehend. "I know," says the author, "that after the perusal of works especially

treating of diseases of the chest, pupils, and practitioners too, are often quite incapable of instituting an ordinary examination, and of distinguishing the more common physical signs. With terms they may be sufficiently familiar; the theory of morbid sounds may not be unknown to them; but how they are to elicit some of these sounds, and how they are to distinguish others, they know not. They cannot, in fact, *practise* auscultation and percussion; and they are unacquainted with the mode of setting about it." It is only by practice that competent knowledge can be attained; but unless one has enjoyed the advantages of clinical instruction, he finds it difficult to take the first step towards the acquisition of such knowledge. This work was written to aid such beginners, and contains directions how auscultation and percussion are to be performed, as well as an account of the indications afforded by them. It has these decided advantages, that it is small, cheap, and intelligible; and written as it is by one who is thoroughly master of his subject, it is confidently recommended to every student or practitioner who needs a guide in his explorations of the Chest. The woodcut which is affixed will give the reader a good idea of the artificial divisions of the chest and abdomen.

ART. X.—*The Practice of Surgery.* By JAMES MILLER, F.R.S.E., F.R.C.S.E., Professor of Surgery in the University of Edinburgh; Surgeon to the Royal Infirmary; Author of Principles of Surgery, &c., &c. Philadelphia: Lea & Blanchard. 1846. 8vo. pp. 496.

So numerous of late have been the publications on Surgery in this country, that another volume on the same subject would hardly seem to be called for. The Lectures of Colles and Brodie, the popular volumes of Liston, and the works of the famous Sir A. Cooper, have all been issued within a few years, not to speak of the Principles of Surgery by the au-

thor of the present work, the reprint of Cooper's Surgical Dictionary, the New York edition of Velpeau's elaborate treatise on Surgery, and the splendid quarto volume on Operative Surgery by Dr. Pancoast. Judging from the quick succession in which these works have followed each other, the surgical spirit of our country must be high. The author of the volume before us modestly disclaims any intention to put it forth "in rivalry of the excellent works on practical surgery which already exist." It is intended as a companion to his "Principles of Surgery," the two volumes together forming a text-book, which he undertook at the request of his pupils. The fact that they have been adopted by other teachers of surgery, as text-books, is decisive proof of their adaptation to the wants of the learner. The manner of the author is the best, being simple, concise, and clear. The practitioner who has occasion to look into its pages, will find the *practice of Surgery* laid down in a readable compass, without circumlocution, or unnecessary citation of authorities.

ART. XI.—*The Natural History and Diseases of the Human Teeth.* By JOSEPH FOX, M.R.C.S.L., Member of the Society of Medicine, Paris; Lecturer on the Structure and Diseases of the Teeth, at Guy's Hospital; and Surgeon Dentist to their Royal Highnesses the Dukes of Kent and Sussex. First American, from the third London edition. *Remodled, with an Introduction and numerous additions.* By CHAPIN A. HARRIS, M.D., D.D.S., Professor of Practical Dentistry and Dental Pathology in the Baltimore College of Dental Surgery; Fellow of the American Society of Dental Surgeons; Member of the Medico-Chirurgical Faculty of Maryland; Author of Principles and Practice of Dental Surgery, &c., &c. Illustrated with thirty plates. Philadelphia: Ed. Barrrington & Geo. D. Haswell. 1846. Royal 8vo. pp. 440.

Within two years, we have been called upon to announce the appearance of three works on the Teeth, all of them voluminous, and two of them making a very imposing show. The one which forms the subject of the present notice,

comes before the profession in our country with all the advantages of a finished mechanical execution. Its size, paper, type, and pictorial illustrations place it in the first class of American books relating to Dentistry. The American editor enjoys a high rank among dental surgeons, and he has brought his brethren under renewed obligations, by inducing the liberal publishers to send forth the celebrated work of Fox in so tasteful a style. Dr. Harris is determined that the dentists of the United States shall possess a library; and in his own excellent treatise, and the one which is now offered for their acceptance, he has placed within their reach the most valuable stores of information relative to the anatomy, physiology, and diseases of the teeth. Dentistry, both as an art and science, must advance in our country, under so judicious and industrious a culture.

ART. XII.—*Elements of Physiology, including Physiological Anatomy, for the use of the Medical Student.* By WILLIAM B. CARPENTER, M.D., F.R.S., Fullerism Professor of Physiology in the Royal Institution of Great Britain; member of the American Philosophical Society; and Corresponding member of the National Institute of the United States, &c., &c. With 180 Illustrations. Philadelphia: Lea & Blanchard. 1846. 8vo. pp. 566.

Dr. Carpenter is the author of several works on Physiology which have been well received. His "Principles of Physiology," published some years ago, is in the hands of many of our readers; besides this elaborate work, he has written a "Popular Treatise on Vegetable Physiology," which Messrs. Lea & Blanchard have issued in this country; and another volume from his pen entitled "Principles of General and Comparative Physiology" is going through the press of the same publishers. The work before us is designed especially for students, as a manual to accompany them in the study of the elements of physiological science. It necessarily combines, in some degree, the scope of his two larger works, yet it has claims to be regarded as something more than a mere abridgment of them, the plan on which it is written being in many respects different. He commences his exposition of the char-

acters of "organized structures and of vital phenomena by a full account of the development and metamorphoses of *cells*, and of the purposes which these effect in the living body, either in their original or their altered condition." Dr. Carpenter believes that the inferences, which may be drawn from the observations on this subject, "are entitled to hold the same rank in physiological science as that taken by the doctrine of mutual attraction in general physics, or of elective affinity in chemistry." They are, therefore, early introduced in his treatise, and the chapter devoted to their consideration makes one-fourth of the entire volume.

The science of physiology was never more rapidly progressive than it is at the present day, and for this reason we require frequent publications on the subject to keep us informed of the accessions made to it from year to year. The author of the treatise under notice is an original laborer in this field, and is contributing his share towards the advancement of the science. His works are entitled to all the popularity they have enjoyed. His is a vigorous, comprehensive mind; he sees clearly the subject before him, and imparts to his readers a distinct notion of what he considers "the typical facts" of the science, without embarrassing them by details. The subjects of which his several volumes treat possess great attractiveness, and his readers, as they go along with him in the enunciation of his strange and wonderful truths, will find themselves charmed as well as instructed.

ART. XIII.—*Elements of Chemistry, including the history of the Imponderables and the Inorganic Chemistry of the late* EDWARD TURNER, M. D., F.R.S.L.&E. Seventh edition. *And the Outlines of Organic Chemistry,* By WILLIAM GREGORY, M.D, &c., Professor of Chemistry in the University of Edinburgh. *With Notes and Additions.* By JAMES B. ROGERS, M.D., Professor of General Chemistry, Franklin Institute; Lecturer on Medical Chemistry, &c.; and ROBERT E. ROGERS, M.D., &c., Professor of Chemistry and Materia Medica, University of Virginia, &c. Philadelphia: Thomas, Cowperthwaite & Co. 1846. 8vo. pp. 848.

As we remarked of physiology, just now, it is emphatically true of chemistry, that it requires a continual posting up,

in order that men may know what new triumphs it has been achieving. This work of Dr. Turner's was long the decided favorite in this country of all the treatises on Chemistry. So long as the author lived he continued to retouch it, issuing new editions from time to time, which embraced all the discoveries and improvements in the science. When his lamented death occurred, his "Elements" gradually declined, or were partially superseded by more modernized works. From this temporary eclipse it is the purpose of the editors to recover it, and we have no doubt their effort will be attended with success. All that this admirable system needed was a periodical revision, keeping it up with the march of chemical science. Having now been advanced to that point, it will not fail to resume its place at the head of the class of chemical text-books.

We received a copy of this valued work from the publishers through our enterprising booksellers, Messrs. Morton & Griswold.

ART. XIV.—*An Introduction to Entomology; or Elements of the Natural History of Insects: comprising an account of noxious and useful Insects, of their metamorphoses, food, stratagems, habitations, societies, motions, noises, hybernations, instinct, &c., &c.* With plates. By WILLIAM KIRBY, M.A., F.R.S.&L.S., Rector of Barham, and WILLIAM SPENCE, Esq., F.R.S.&L.S. From the 6th London edition, which was corrected and considerably enlarged. Philadelphia: Lea & Blanchard. 1846. 8v. pp. 600.

In the very entertaining book of travels, alluded to in our last number, styled the "Voyage of a Naturalist," the following amusing incidents are related by Mr. Darwin as having happened while he was in Chili: "One day, a German collector in natural history, of the name of Renous, called, and nearly at the same time an old Spanish lawyer. Renous, alluding to me, asked him what he thought of the King of England sending out a collector to their country to pick up lizards and beetles, and to break stones. The old gentleman thought se-

riously for some time, and then said: 'It is not well—*hay un gato encerrado aqui* (there is a cat shut up here). No man is so rich as to send out people to pick up such rubbish. I do not like it: if one of us were to go and do such things in England, do not you think the King of England would very soon send us out of his country?' Renous himself, two or three years before, left in a house at S. Fernando some caterpillars, under charge of a girl to feed, that they might turn into butterflies. This was rumored through the town, and at last the Padres and the Governor consulted together, and agreed it must be some heresy. Accordingly, when Renous returned, he was arrested."

Perhaps, some of our readers agree with the old lawyer, in his estimate of the value of entomology: if so, we are pretty sure of not receiving their thanks for introducing the above work to their acquaintance. We are well aware that the physician engaged in an engrossing practice, whether in town or country, has not much leisure for the perusal of books unconnected with his profession; but we know just as well, that while the few are thus immersed in business, the many have the command of more time than they are disposed to give to professional reading. How many are the hours wasted by nearly every young physician, waiting for practice—anxious, dreary hours, because unoccupied! Why not spend these hours in the study of such works as that of Kirby and Spence, wherein the physiologist, farmer, horticulturist, philosopher, and moralist, may find matter to instruct him. We have the authority of at least one wise man, that we may gain wisdom by studying the habits of the animals below us. "Go to the ant," are the well known words of Solomon, "thou sluggard, consider her ways and be wise; which, having neither captain, overseer, nor ruler, prepares her bread in the summer and gathers her food in the harvest."

It is wise in us to enlarge the sphere of our intellectual enjoyments; and by few things can we do so more effectually than by cultivating a taste for natural history. To the Padres and Governor of Chili it appeared a very senseless if

not heretical business, to be hatching butterflies, and breaking stones; but for the man whose taste has been improved by study, there is a charm in every walk of nature—in the humblest insect tribes, volumes of instruction—'sermons in stones, and good in everything.' Does not medicine owe to the insect race a valuable remedy; and is it not to the same race that we are indebted for honey and for silk? But not to pursue these commonplaces, we close our notice of this volume on Entomology, which will be found by those who read it rich in curious information, by a short extract concerning the medical relations of insects, of which the authors say: "Had I addressed you a century ago, I could have made this an ample history. Amongst scores of infallible panaceas, I should have recommended the *woodlouse* as a solvent and aperient; powder of *silk-worm* for vertigo and convulsions; *millepeds* against the jaundice; *earwigs* to strengthen the nerves; powdered *scorpion* for the stone and gravel; *fly-water* for disorders in the eyes, and the *tick* for erysipelas. I should have prescribed *five gnats* as an excellent purge; *wasps as diuretics;* lady-birds for the colic and measles; the cockchafer for the bite of a mad dog and the plague; and ants and their acid I should have loudly praised as incomparable against leprosy and deafness, as strengthening the memory, and giving vigor and animation to the whole bodily frame. But these good times have long gone by. You would, I fear, laugh at my prescriptions notwithstanding the great authorities I could cite in their favor; and even doubt the efficacy of a more modern specific for toothache, promulgated by a learned Italian professor, who assures us that a finger once imbued with the juice of *Rhinobatus antiodontalgicus* will retain its power of curing this disease for a twelvemonth!"

This beats homœopathy.

Kirby & Spence, Carpenter, Miller, &c., may be found at the bookstores of Jas. Maxwell and F. W. Prescott, in this city.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Cause, Nature, and Treatment of Western Fevers.—Dr. Hunt, of Wisconsin, has the following remarks on this subject in the Boston Medical and Surgical Journal. Everything written concerning Western fevers has interest for those who practice physic where they prevail. Among the original communications in this number we publish the speculations of Dr. Harris, touching malaria, and the *modus operandi* of febrifuges. Dr. Hunt's views on the same subjects are given in a summary style; it will be interesting to compare the conclusions of two writers who have studied the phenomena of the same disease a thousand miles apart.—Eds.

1. Marsh miasm is a subtle virus, and the material agent that produces the various (so called) bilious fevers of the West.
2. This poison is inhaled, enters the circulation, and acts as a disturbing cause in the system of nutrition.
3. It destroys the healthy balance between composition and decomposition, or assimilation and metamorphosis, diminishing or entirely suspending the former, and morbidly increasing the latter.
4. The metamorphosis of the vital tissues does not result in the formation of cholic acid and urate of ammonia, or proper bile and urine, but in an *abnormal* transformation.
5. The transformation of the living organism does not

consist in the oxidation of its constituent elements, and the consequent formation of carbonic acid matter and animal heat, as is the case in inflammatory fevers and those of high reaction.

6. For want of centrifugal force, or in consequence of the sedative influence of the poison, this mass of transformed animal matter with the blood is accumulated in the central vascular system, and in consequence of a deficient hæmatosis the blood is rendered dark and thick.

7. Congestion consists in an overloaded state of the vascular system with this impure blood, and an engorged and obstructed condition of the liver, and a consequent determination of blood to the head.

8. The brain, in all cases of portal congestion and hepatic obstruction, suffers in consequence of a deficient inferior circulation, while the balance is thrown upon the brain, constituting what might with propriety be called *hyperæmia of the encephalon*, which may, and in fact often does terminate in inflammation of this organ in fatal cases of congestive fever.

9. There are three grand indications to be fulfilled in the treatment of congestive fever, whether of the intermittent, remittent, or continued form; viz: 1, recall the circulation to the surface and extremities; 2, stop the *morbid* metamorphoses of the vital tissues; 3, unload the liver and keep up a free discharge of "bilious matter"(?) until the blood is renovated.

10. The first indication is fulfilled by the use of stimulants, externally and internally.

11. The second, by the introduction into the system of some eutrophic agent, such as quinine, salacine, arsenic, &c., which will act on the system of nutrition, neutralizing the poison or fortifying the vital powers against the chemical, or the force of assimilation against that of transformation, and thereby restore the balance between these two opposing movements in the animal economy.

12. The third and last indication is fulfilled by emetics, deobstruents and laxatives. Ipecac. makes the best emetic; calomel the best deobstruent; castor oil, rhubarb, and jalap, the best cathartics.

13. Drastic cathartics should generally be avoided, especially in the first stage of the disease. They do hurt by irritating the mucous membrane of the alimentary canal, and therefore increasing the congestion by diminishing the centrifugal force, or rather by increasing the centripetal; also by

producing a serous discharge from the portal capillaries without acting particularly upon the liver, thereby rendering the blood in the portal vessels more thick and gluey, which is already too much so to circulate readily through this organ. At the same time severe purging tends powerfully to debilitate the patient, without the least possible gain in the first stage, except it unloads the bowels of fecal matter. But in the latter stage of the disease, after the "bilious matter" is discharged in large quantities into the bowels, it is necessary to give pretty active and frequent cathartics.

14. Profuse perspiration is of no use, but on the contrary it thickens the blood and debilitates the patient.

Note.—I have known patients, almost destitute of fat, laboring under congestive fever, to lose five pounds in weight a-day for several days in succession; and the only secretions that were materially increased, were those of the liver and bowels. The discharge was homogeneous, mostly black, and of a semi-fluid consistency. The respiration was slow and oppressed, and the surface and extremities cool; the pulse slow and soft. Now if the tissues did not pass off through the liver and bowels, where did they find their exit?

On the Treatment of Placenta Prævia. By J. J. Tweed, Jr., M.R.C.S. Eng., London.—As the question of treatment in cases of placenta prævia is still undecided, and the opinions of many of the most eminent accoucheurs at variance on the point, a case, illustrative of the safety of what may be called the 'new practice,' (although in reality not so), cannot, I think, be otherwise than interesting at the present moment, especially when the importance of the subject is taken into consideration. Statistics have already shown the comparative merits of the two modes of treatment; still, it behooves every one, whatever the practice he adopts, to publish the result, successful or unsuccessful. Where the opportunities for observation occur (fortunately, we may say) so rarely, it is difficult for a man to form an opinion on his own experience alone; on these grounds, I venture to ask a space in your valuable journal for the publication of the following case:—

I was hastily summoned to attend a patient, Mrs. D., aged 22 years, residing in Union-street, in the seventh month of her second pregnancy, (she had a miscarriage, at the fourth

month, a year ago,) on Sunday morning November 7th. On my arrival, I learned that labor pains had come on quite suddenly, about nine o'clock, (it was now half past ten), accompanied with profuse discharge which was increased at each pain. She was in a sitting posture, countenance pallid, complained of being 'faintish,' with short pains recurring at intervals of three or four minutes. I immediately had her placed in bed, and on moving her, observed a quantity of coagulated blood on the carpet, over which she had been sitting, and her clothes were also saturated. On examination per vaginam, the uterus was found high up, the os uteri dilated to about the size of a shilling, thick and rigid; passing the finger within the os, the placenta could be distinctly felt, attached immediately over it; each contraction of the uterus gave rise to a gush of blood. I immediately plugged the vagina. At the end of two hours, the plug being removed, the os uteri was found less rigid, thinner, and dilated to the size of a crown piece, each pain forcing the presenting portion of the placenta partly through; as far as the finger could reach, no adhesion of the placenta could be detected. The hemorrhage was now much diminished; in fact, it had almost entirely ceased. Dr. Murphy, who now kindly saw the case with me, advised again the plugging of the vagina, and if hemorrhage returned to any extent, to introduce the hand, and turn the child immediately. Two hours elapsed, at the expiration of which the plug and placenta were both expelled. No further hemorrhage occurred; the head of the child, with one hand, partly protruded through the os uteri at each pain. I now allowed the labor to proceed naturally for about an hour; the pains then becoming rather inefficient, two doses of the secale cornutum were administered, and the birth of a still-born child took place, exactly an hour after the expulsion of the placenta. The uterus contracted firmly, and the patient is doing well.—*London Lancet.*

The Royal Academy of Medicine and the King of the French. It is usual for the more important public bodies in France to present to the King, on New Year's Day, an address, to which he generally makes some reply. In accordance with this annual custom, a deputation from the Academy of Medicine was admitted to the royal presence on 1st day of January, when the following address was delivered by the President:—

SIRE:—The Royal Academy of Medicine, through our voices, respectfully unites in the concert of gratitude and affection which rises to the throne from every part of France.

Happy to think that it deserves the powerful protection with which your Majesty honors it, the Academy pursues with zeal the course of its useful labors. To endeavor to solve the numerous and varied questions which interest public health; to pursue and forward the progress of science; such is the double mission which is confided to the body which we represent. All the labors, all the desires, of the Academy are directed to one object—the faithful performance of the duties with which it is entrusted; and it dares to hope that its efforts have not remained quite sterile. If it is true that public esteem and approbation have rewarded the endeavors of the Academy, the thanks of its members are due to your Majesty, who deigns to afford to it encouragement, protection, and support.

May the Academy, Sire, present you, as to-day, for many years, the homage of its labors, and the tribute of the gratitude which it feels. This is its most ardent wish as it is that of all France, the tranquility, prosperity, and happiness of which are so intimately connected with the preservation of your valuable existence.

The King answered in the following terms:—

I am gratified and moved by the sentiments expressed in the name of the Academy of Medicine; I appreciate the importance and the utility of your labors, and I am happy to learn that the protection which I so willingly give to the Academy has contributed to increase the merited consideration which it commands. No one better than I can appreciate the services which you render, of which, indeed, I am myself a good example; for in spite of my seventy-two years, I am in good health, as you see. May you gentlemen, long continue to serve humanity and science.

Ibid.

Rupture of the Stomach in a Boy. By J. STEWART ALLEN, Esq., Resident Surgeon to the St. Marylebone Infirmary. On Thursday, December 11th, 1845, an inquest was held at the St. Marylebone Infirmary, before Mr. Wakley, M.P., on the body of a boy named James Geogehan, aged 10 years.

The boy had been an inmate of the workhouse for upwards of eight years, during which time he had been frequently ailing, but on the Sunday previous to his death he had appeared in his usual health. On Sunday night, about 12 o'clock, the nurse of the school heard him moaning in bed, and afterwards going to the water-closet. She rose and questioned him. He complained of extreme pain over the abdomen, which was much enlarged. He was brought over to the Infirmary about a quarter before 1 o'clock on Monday morning. When admitted, he was in a state of collapse, countenance sunk, extremities cold, and pulse not perceptible at the wrist; he had an increasing desire to vomit, but could bring nothing up; the abdomen was greatly distended, and very tense. Warmth was applied over the body, mustard sinapisms, turpentine fomentations, &c., and stimulants were administered internally, but without effect; he gradually sank, and died at half past 3 on the same morning, about four hours (as well as could be ascertained) after his first complaining of pain.

The following were the post-mortem appearances:

The abdomen was enormously distended, the false ribs being pushed outwards, quite altering the natural shape of the body; the lungs were healthy; the pericardium so intimately adhering to the heart that it could not be separated. On opening the abdomen, a rush of fœtid air took place; the stomach was found collapsed, much enlarged, and stretching across the abdomen; the small intestines were also much distended with air and semi-digested food. On raising the stomach, a rupture was found to have taken place at its cardiac extremity, through which a portion of the contents had escaped into the abdomen; the stomach still contained about a pint of pulpy semi-digested food. On removing the contents the mucous membrane was found to be soft, and presented a mottled appearance; the pyloric extremity was much thickened, and firmly contracted, inclosing in its folds two small pieces of potato; so close was the contraction, that when the stomach was filled with water, it would not permit a drop to pass. The cæcum was contracted, and throughout, the calibre of the large intestines was very small, in some places not being wider than a common quill; there were portions of the large intestines, each about an inch and a half in length, of a dull reddish color; there was considerable congestion of the veins on the surface of the brain, but in other respects that organ was healthy.

This case is remarkable as one of spontaneous rupture without ulceration; but it should be remarked that the boy

had for some years suffered from deficient nutrition; he generally ate largely, but seemed to derive little benefit from his food. The stomach has since been examined with the microscope. The white spots which gave the mucous membrane a mottled appearance, were found to be mucous follicles much enlarged, and distended with their natural secretion; the mucous membrane was soft, and loaded with fluid. These were the only morbid appearances that could be detected in the coats of the stomach.—*Ibid.*

Potato Disease.—Dr. Playfair, in a lecture lately delivered to the Royal Agricultural Society, at the Royal Institution, stated, that he concluded from all his researches into the potato disease, that the potato labored under *dropsy!*—a singular enough conclusion for a chemist to draw; for a sound and a diseased potato, each dug from the same locality or root, when sliced and dried, will be found to contain as nearly as possible a like proportion of moisture.—*Ibid.*

Alleged Cure for Rheumatism.—A worthy, kind-hearted gentleman assured us the other day, that he was in possession of a never failing remedy for rheumatism, in all its protean forms. It was this: carry a bit of brimstone in the pantaloons pocket, habitually, and never be without it. On asking for an explanation of the principle upon which the disease was either cured or kept at bay, he at once solved the problem by saying the sulphur was absorbed by the blood, the seat of the malady!—*Boston Med. and Surg. Jour.*

Fever in Africa.—The days of out-and-out Broussaism are, thank God, passed; and medical men, even in France, have now found out that a fever is not necessarily an inflammation. The possession of Algieria, if it has not been very useful to our neighbors in a commercial or political point of view, has at least, had the effect of teaching the medical officers of their army—and the important lesson has gradually extended itself to the civil practitioners—to abandon many of the principles of their early professional education in Paris, and to have recourse to a more enlightened and successful

method of treating the fevers of Africa, which are almost invariably of a remittent or intermittent character. Bark, opium, and wine, have, in a great measure, taken the place of venesection and ptisans. In these fevers, it is of the highest consequence to keep up the spirits of the patient; for the state of the mind has no inconsiderable influence in aiding or in counteracting the effects of the remedies employed for their subjugation. Often has the expected fit of ague been observed not to occur, if the attention has been intensely occupied by something of absorbing interest, or if the feelings have been strongly roused by some joyous or alarming intelligence.—*Med. Chir. Rev.*

Devergie's Ointment for Chilblains.—Lard, seven drachms and a half; creasote, ten drops; solution subacetate of lead, ten drops; watery extract of opium, a grain. Mix for an ointment.—*Dub. Hos. Gaz.—Ibid.*

Artificial Teeth.—The manufacture and application of artificial teeth have been brought to such perfection during the last fifteen or twenty years, that, when properly fixed in the mouth, it is difficult for a common observer to tell wherein they differ from the natural organs. They are made so as not only to resemble these, but also to be worn with comfort and to subserve, to a considerable extent, the purposes for which they are designed. But notwithstanding the perfection to which this branch of the dental art has been brought, the bungling and clumsy manner in which they are constructed and applied by, perhaps, a majority of dentists, it is really questionable whether in the aggregate, they are not productive of more injury than benefit. That a vast amount of mischief does result from their application, is undeniable. But, however much this is to be regretted, it is an evil which cannot be remedied, as long as empiricism in dentistry is encouraged and prevails to the extent to which it at present does.

In the application of an artificial crown to the root of a natural tooth, the simplest of all the methods of inserting artificial teeth, much judgment is required to determine the circumstances under which the operation ought, or ought not to be performed. It may be productive of incalculable advan-

tage or injury, as it may be performed under favorable or unfavorable circumstances. For example, an artificial crown skilfully applied to a perfectly sound root situated in a socket free from all disease and morbid tendency, and in the mouth of a person of a good constitution, constitutes the very best and most durable substitute that can be employed for the loss of the crown of a superior incisor or cuspidatus; but if applied to a dead root or to one situated in a diseased alveolus, or from which there is a discharge of fœtid matter, or to one which is very soft and situated in the mouth of an individual of an exceedingly susceptible habit of body, it may be productive of lasting and irreparable injury.

In the application of artificial teeth on plate, either with or without clasps, a much greater amount of judgment, skill, and a more perfect knowledge of the laws of the economy, both in health and disease, are required, in order to secure to the patient the advantages capable of being derived from such substitutes, and to prevent the injury liable to be produced by them when constructed and fixed in the mouth in an improper manner. It is important that they should be so adjusted and applied as to restore the symmetry and contour of the face and to be useful in the mastication of food, in enunciation, and to be worn with ease and comfort by the patient. To secure these advantages, the teeth should be of the right size and color, correctly arranged on the plate, and this latter accurately adopted to all the inequalities of the parts on which it is to rest. If the contrivance is to be held in the mouth by means of clasps, these should be wide, and so applied to the teeth intended to be embraced by them, as to give to it the greatest stability, and, at the same time, without exerting any unequal or undue pressure upon them, and in such a way that the piece may be easily and readily removed and replaced by the patient.

But preparatory to their application, the remaining teeth, if there be any in the mouth, and the gums should be in a healthy condition, and it is oftentimes necessary to wait from six weeks to six months, after having instituted the necessary preparatory surgical treatment, before artificial teeth, fixed on plate, can be permanently and advantageously applied, for the reason, that the shape and size of the alveolar border, after the removal of the teeth, undergo a very great and striking change. If the teeth be applied before the completion of these, the plate will soon lose its adaptation, and bear unequally on the parts which it covers, and thus, be productive of irritation, as well as afford lodgments in the places where

it does not touch, to extraneous matter, which soon becomes offensive and imparts to the breath an offensive odor.

It is equally improper to apply a plate over the roots of teeth. Whenever it is done, the softer parts around them become inflamed and spongy, and vitiate the secretions of the mouth. In this way, they are not only rendered hurtful to the remaining teeth, but also unfit for the purpose for which they are designed. Besides, a dental substitute thus applied, cannot be worn with comfort or satisfaction, nor be made to subserve any valuable purpose whatever.

But it is often necessary to apply artificial teeth almost immediately after removing the natural ones. In this case, a temporary set should be prepared, which, however, should only be worn when it is absolutely necessary, but in no case should a plate be applied over a dead root.

When the substitute is held in the mouth by means of clasps, it should be removed twice a day, and cleansed. The teeth, too, to which the clasps are applied, should also be thoroughly cleansed every time it is removed. These are pre cautions which should be strictly observed by all who wear artificial teeth inserted in this manner. If they be neglected, the secretions of the mouth which get between the clasps and the teeth, will become corrosive, and, sooner or later, cause the destruction of the latter.

The foregoing remarks are thrown out as hints to the young and inexperienced practitioner. We might say much more, but our limits, at present, will not permit us to enlarge upon the subject. At some future period we may enter more into detail.—*Stockton's Dental Intelligencer.*

Case of Extreme Diffusion of Odors.—Dr. Wilcocks, in the Philadelphia Medical Examiner, states the following fact:

When at sea, two years ago, two hundred miles to the westward of the coast of Ireland, myself and many of the other passengers observed a smoky odor, which lasted during several successive days. An appeal was made to our captain for an explanation of the phenomenon. He informed us that he had frequently remarked it before, and that it was owing to the long continuance of the easterly winds, which carried the odor of *burning peat* far out to sea.

Opium Treatment of Rheumatism.—The most important rule to be remembered in employing opium for the cure of acute rheumatism is, that *full and sufficient doses* shall be exhibited. I have heard of the opiate treatment having disappointed those who have tried it. On inquiry, I have learned that in those cases it has been given only to the extent of a grain every fourth or sixth hour. This is not the treatment of rheumatism by opium; it is making the patient worse than before; it is inflicting on the patient the mischief arising from the stimulant effects of the drug, and withholding from him all the benefits of its sedative influence. The opium should always be increased in dose, both as to frequency and quantity, until the patient feels entire relief; and should be then kept up at that dose until the complaint is steadily declining. *Dr. Corrigan* in *Med. Exam.*

Premature Interments.—It is stated that the cases of premature interments in France, prevented by fortuitous circumstances, amount, since the year 1833, to 94. Of these 35 persons awoke of themselves from their lethargy at the moment the funeral ceremony was about to commence; 13 recovered in consequence of the affectionate care of their families; 7 in consequence of the fall of the coffins in which they were inclosed; 9 owed their recovery to wounds inflicted by the needle in sewing their winding sheet; 5 to the sensation of suffocation they experienced in their coffin; 19 to their interment having been delayed by fortuitous circumstances; and 6 to their interment having been delayed in consequence of doubts having been entertained of their death. *Prov. Med. & Surg. Jour.—Med. Exam.*

Asserted Injurious Effects of the Manufacture of Lucifer Matches.—Several German practitioners, and among others, M. Heyfelder, clinical professor of surgery at Erlangen, have published a number of cases of necrosis of the maxillary bones, which they attribute to the influence of the materials used in the manufacture of lucifer matches, the patients having thus been employed. M. Bricheteau, wishing to verify the accuracy of these statements, with reference to the asserted cause of the disease, has carefully visited all the manufactories in

which chemical matches are made in Paris and the neighborhood. The results of M. Bricheteau's investigations do not appear to confirm the statements made in Germany. Among the two thousand workpeople, men and women, who are thus employed in or near Paris, it does not appear that a single well-authenticated case of necrosis of the maxillary bones has occurred. Three or four cases of disease of the maxillary are mentioned by him, but he states that the disease was either syphilitic, or existed before the patients had worked at the factory.

The manufacturers have remarked, that the vapors that result from the instantaneous combustion of the matches, which contain sulphurous acid, and phosphorous and phosphoric acid, make the workpeople cough, and that the coughs thus occasioned are more troublesome in winter than in summer, owing to the ventilation of the workshops not being then so good; but they have not observed any other symptoms.—*Jour. de Méd.—Bos. Med. & Surg. Jour.*

National Medical Convention.—The National Medical Convention at New York, having transacted all the business for which it was convened, adjourned to meet at Philadelphia on the first Wednesday in May next. The following resolution offered by Dr. O. S. Bartles, of New York, led to a protracted discussion in the convention, and was finally referred to a committee, with directions to report on the subject at the meeting in Philadelphia:

Resolved, That the union of the business of teaching and licensing, in the same hands, is wrong in principle, and liable to great abuse in practice. Instead of conferring the right to license on medical colleges, and State and county medical societies, it should be restricted to one board in each State, composed, in fair proportion, of representatives from the medical colleges, and the profession at large, and the pay for whose services, as examiners, should, in no degree, depend on the number licensed by them.

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LOUISVILLE, JUNE 1, 1846.

NATIONAL MEDICAL CONVENTION.

This body assembled, Tuesday the 5th of May, at the University Medical College, in the city of New York. The assemblage embraced one hundred and twenty seven members, from sixteen States. The medical schools represented in the Convention were, the two schools of the city of New York, the Geneva Medical College, the Vermont Medical College, the Berkshire Medical Institute, in Massachusetts, Medical Institute of Yale College, the Albany Medical College, the Pennsylvania Medical College, the Washington Medical College of Baltimore, La Porte University, the Illinois Medical College, the University of St. Louis, and the Franklin Medical College. Among the teachers in medical schools, we remark the names of Professors Pattison, Bedford, Parker, Knight, Lee, Beck, Patterson, Atlee, Baxley, Pope, and Clymer. Several editors took part in the deliberations of the Convention, among whom were Dr. John Bell, Dr. Hays, Dr. Fenner, Dr. Lee, and Dr. Flint.

A temporary organization, preparatory to the regular proceedings of the Convention, was effected by the nomination of Dr. Bell, of Philadelphia, as Chairman, and Dr. Buell, of New York, as Secre-

tary. Dr. Knight, of New Haven, was elected President of the Convention; Dr. Bell, and Dr. Delafield, Vice Presidents; and Dr. Stillé, of Philadelphia, and Dr. Arnold, of Savanah, Secretaries.

Dr. Bedford offered the following resolution which he accompanied by some remarks intended to show that it was useless to proceed unless the convention were what in truth it ought to be, and what it is called, a *National Convention.*

"Whereas, the object of this Convention has not been carried out; and whereas, a full representation from the Medical Colleges and Universities is necessary; and whereas, the call has been defeated by the absence of the necessary members from the various parts of the Union, that, therefore, this Convention do adjourn *sine die.*"

This motion was lost by a vote of 74 to 2; whereupon Dr. Clymer, of Philadelphia, offered the following resolution:

"*Resolved,* That a Committee be appointed to provide other accommodations than the present for the sittings of this Convention."

Dr. Beadell, of New York, moved as an amendment, "that this Convention do immediately adjourn to the rooms of the College of Surgeons and Physicians." Dr. Bedford made a brief explanation, in which he disavowed any sentiments of hostility or disrespect towards the Convention. Dr. Pattison followed his colleague in the same strain, and concluded by remarking, that, after these explanations, "if the Convention think right to refuse the courtesies and civilities of the Faculty of the University of the City of New York, all he had to say was, 'God speed them.'" The disclaimers were esteemed satisfactory, and the removal did not take place.

The Convention was in session two days, and when it adjourned it did so to meet at Philadelphia in May next. Among the resolutions adopted we note the following, as among the most important. They were offered by Dr. Hays, editor of the American Journal of the Medical Sciences, and seconded by Professor Pattison.

"*Whereas,* It has been shown, by experience, that the association of persons engaged in the same pursuit, facilitates the attainment of their common objects; therefore,

"*Resolved,* That it is expedient for the medical profession of the United States to institute a National Medical Association, for the protection of their interests, for the maintenance of their honor and respectability, for the advancement of their knowledge, and the extension of their uselfulness.

"*Resolved*, That a committee of seven be appointed to report a plan of organization for such an association, at the meeting to be held in Philadelphia on the first Wednesday in May, 1847.

"*Resolved*, That a committee of seven be appointed to prepare and issue an address to the different regularly organized Societies and chartered Medical Schools in the United States, setting forth the objects of the National Medical Association, and inviting them to send delegates to a Convention to be held in Philadelphia, on the first Wednesday in May, 1847.

"*Resolved*, That it is desirable that a uniform and elevated standard of requirements for the degree of M.D., should be adopted by all the medical schools in the United States, and that a committee of seven be appointed to report on this subject at the meeting to be held in Philadelphia on the first Wednesday in May, 1847.

"*Resolved*, That it is desirable that young men, before being received as students of medicine, should have acquired a suitable preliminary education, and that a committee of seven be appointed to report on the standard of the acquirement which should be exacted of such young men, and to report at the meeting to be held on the first Wednesday in May, 1847.

"*Resolved*, That it is expedient that the medical profession in the United States should be governed by the same code of medical ethics, and that a committee of seven be appointed to report a code for that purpose at the meeting to be held at Philadelphia on the first Wednesday in May, 1847."

We are truly gratified at the results of the Convention, and especially at the perseverance manifested by its members. They were not discouraged by the partial attendance, but resolved to hold on and hold out, until more interest should be awakened in the minds of the profession. We predict that the next Convention will be more generally attended,—that the medical schools and societies will be more numerously represented, and that great benefits will yet flow from these assemblages.

We have compiled this hasty sketch of the proceedings of the Convention from the New York papers. A more detailed report may soon be expected, the Convention having decided to publish its proceedings in pamphlet form, and to distribute ten thousand copies of the same among the profession.

FACTS FROM CORRESPONDENTS.

ASAFŒTIDA NO PREVENTIVE OF MEASLES.

Dr. Stahl, of Quincy, Illinois, thinks it worth his while to show, that Dr. Harper (see vol. 3, this Journal, new series, p. 455) has not made out the claims of asafœtida to be regarded as a preventive of measles. We make the following extracts from his letter, deeming any lengthened discussion of the subject quite unnecessary.

"In order to prove anything a preventive, we must first prove that measles is contagious, which I think would be very difficult to do, and secondly, we must prove that when it rages epidemically, every person who has not had the disease, must necessarily be attacked by it. To examine these two points, however, would lead me beyond the limits which I set for this note. My object is merely to disprove the arguments of Dr. Harper by my own direct and but recent experience. Neither myself nor any of my children ever had the measles. During the recent prevalence of that disease in this city and neighborhood, I attended and saw at least one hundred cases in all its various stages, handled the patients while they were in perspiration, sat on the side of their beds; in short, was in the closest contact with them, and not seldom in ten minutes after thus handling a patient with measles, and without washing my hands or changing my clothes, I would nurse or play with my own children, and *yet neither myself nor any of my children have as yet manifested the least symptoms of the disease.*

"Had I or my family, during the prevalence of the disease, used any soi-disant preventive, I might, like Dr. Harper, have been induced to give it the credit of our protection."

April 10th, 1846.

A Case of Hydrothorax successfully treated. By Drs. Crum and Brysacher, of Stark county, Ohio.

James Wolf, æt. 18 years, of delicate constitution, a chair-maker by occupation, had been two months under medical treatment when first seen by us. We found him extremely debilitated, with hard pulse; carotids throbbing; palpitation of the heart; anorexia; epistaxis; water in the chest, which was heard making its peculiar sound when he shifted his position. In consequence of the hydropic collection he was unable to lie down, and slept sitting propped up in bed. His feet were much swollen, and from his long confinement in his extremely emaciated condition bed sores had been formed about the sacrum and coccyx.

Reduced as was the patient we resorted to venesection. Afterwards we applied a blister over the sternum, and followed this by tartar emetic ointment to the same part. In addition, we gave him calomel, squills and gamboge, as a purgative and diuretic, and employed nitrate of potash and digitalis with a view to the reduction of arterial excitement. By a steady perseverance in this course for six weeks, the young man was relieved of all his distressing symptoms, and is now in robust health.

April 27th, 1846.

A Case of Self-Emasculation. By C. Gliddon Young, M.D., of Greenwood, La.

I was called in the fall of 1837, to see Mr. P., a married man, in respectable circumstances, aged about 35 years, the father of five children, who, in a state of mental despondency, produced by religious excitement and domestic troubles, had emasculated himself. He was an exemplary member and class leader in the Methodist church, and was much in the habit of shouting, which was so disagreeable to his wife that she required him to desist, on pain of forfeiting his connubial rights. Shortly afterwards she discovered that he had deliberately sharpened his knife and maimed himself as above mentioned; taking out first one testicle and then the other, after the manner of castrating pigs. As he was ignorant of the danger of hemorrhage, or the means of guarding against it, he had cut the cord directly across, and both spermatic arteries were bleeding when I got to him. I found him almost exhausted from the loss of blood; he had fainted several times; the scrotum was filled with coagula. I quickly cleared the coagula from one side, and found that the cord had retracted so far within the abdominal ring as to be scarcely within reach; but a tenaculum introduced by the side of my finger enabled me to bring down and secure the bleeding arteries, which I did successively. By a little stimulus he was revived, and his recovery took place without a single untoward symptom.

May, 1846.

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